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ABSTRACT

This report is the third in a series that describes the first-year results of the Rand study (July 1973-July 1974). It summarizes the findings and policy implications resulting from 29 case studies of change-agent projects conducted by Rand staff members and consultants in 25 school districts during April and May 1974. The report also describes the role of the state education agencies in selecting, managing, and disseminating change-agent projects. The case-study sites represent a variety of project objectives and local district conditions. The studies were limited to five types of innovations: career education, bilingual education, reading, staff development, and classroom organization. In the organization of the report, the process of innovation is characterized by three phases: initiation, implementation, and outcomes. Each area is given a chapter of the report. The outcomes of interest to this study are the effects of the project on classrooms, teachers, and students; the extent to which the project treatments were continued after the special project funding ended; and the amount of dissemination that took place between the project schools and nonproject schools within the local education agency and in other districts. (Author/IRT)

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FEDERAL PROGRAMS SUPPORTING EDUCATIONAL CHANGE, VOL. III: THE PROCESS OF CHANGE

PREPARED FOR THE U.S. OFFICE OF EDUCATION,
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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PREFACE

Rand is conducting, under the sponsorship of the U.S. Office of Education, a several-year study of federally funded programs designed to introduce and spread innovative practices in public schools. These change agent programs normally offer temporary federal funding to school districts as "seed money." If an innovation is successful, it is assumed that the district will continue and disseminate part or all of the project using other sources of funds. The Rand study examines four such federal change agent programs—Elementary and Secondary Education Act Title III, Innovative Projects; Elementary and Secondary Education Act Title VII, Bilingual Projects; Vocational Education Act, 1968 Amendments, Part D, Exemplary Programs; and the Right-To-Read Program. The study identifies what tends to promote various kinds of changes in the schools and what doesn't; in particular, the Rand study will identify for federal, state, and local policymakers the nature, permanence, and extent of dissemination of innovations that are associated with the various federal programs and with various federal, state, and local practices.

This report is the third in a series that describes the first-year results of the Rand study (July 1973–July 1974). It summarizes the findings and policy implications resulting from 29 case studies of change agent projects conducted by Rand staff members and consultants in 25 school districts during April and May 1974. The case study sites, chosen from the original sample of 293 projects in 18 states initially surveyed, represent a variety of project objectives and local district conditions. This report also describes the role of the state education agencies in selecting, managing, and disseminating change agent projects.

Four technical appendixes to this volume describe in detail the federal program management approach, state education agency participation, and case studies for each of the programs in the study: Title III, App. A; Reading, App. B; Bilingual Education, App. C; and Career Education, App. D. Appendix A should be of particular interest to researchers or practitioners concerned with the introduction of new approaches to classroom instruction.

Volume I of the series (R-1589/1-HEW, *A Model of Educational Change*) provides a theoretical perspective for the Rand study by analyzing the current state of knowledge of planned change in education and by proposing a conceptual model of factors affecting change processes within school districts.[1]

Volume II (R-1589/2-HEW, *Factors Affecting Change Agent Projects*) contains the analysis of survey data collected from a national sample of 293 projects in 18 states during November and December 1973.

Volume IV (R-1589/4-HEW, *The Findings in Review*) summarizes the findings of Vols. I, II, and III, and also synthesizes extensive data collected by Rand on federal-level program strategy and management for each of the change agent projects. Volume IV also includes a discussion of alternative federal strategies for promoting innovation.

[1] Because of Rand's interest in advancing knowledge of organizational behavior in educational institutions, the research underlying this report was supported in part by an allocation of Rand corporate research funds.

Volume V (R-1589/5-HEW, *Executive Summary*) presents the study's methods and results for a general audience.

Subsequent research will collect additional data on Titles III and VII of ESEA, with particular focus on projects whose federal funding has expired.

SUMMARY

Under the sponsorship of the U.S. Office of Education, Rand has been conducting a study of federally funded programs designed to introduce and spread innovative practices in public schools. These change agent programs normally offer temporary federal funding to school districts as seed money. If an innovation is successful, it is assumed that the district will continue part or all of it using some other source of funds and it will be disseminated to other districts who are interested in replicating it.

The Rand study examines four such federal change agent programs—Elementary and Secondary Education Act Title III, Innovative Projects; Elementary and Secondary Education Act Title VII, Bilingual Projects; Vocational Education Act, 1968 Amendments, Part D, Exemplary Programs; and the Right-To-Read Program.

A major objective of this change agent study has been to describe the institutional and educational processes which appear to affect the success of innovative education projects. This report synthesizes the findings from 29 exploratory case studies of such projects, performed in parallel with a nationwide survey of 293 change agent projects that were in their last or next to last year of funding during the 1973-1974 school year

SAMPLE SELECTION

The case study sites were selected to include a sufficient number of projects from each federal change agent program so that we could assess the effects of different federal policies, while providing, insofar as possible, a diversity of demographic and institutional settings. Further, because the fieldwork was exploratory, we oversampled on reported "project success," and attempted to include those projects that seemed able to provide rich data on the change process. Our project selection was based on data from a preliminary analysis of the survey data, from screening interviews with candidate LEAs, and from a review of project abstracts and evaluations.

In order to minimize the degree of variability that each field observer would have to deal with, we limited our selection of case studies to five types of innovations: career education, bilingual education, reading, staff development, and classroom organization. The first three types are those supported by the Vocational Education, Title VII, and Right-To-Read programs, respectively. The last two represent particular types of Title III projects we decided to focus on because they were trying to bring about significant and wide-ranging change.

Our five groups of projects varied in complexity depending on the curriculum area and target group focus, or on the type of behavioral change they were attempting to produce.

The career education projects, which primarily involved the development and introduction of new curriculum materials, field trips, counseling, and work experience programs, were the least complex of our sample. No significant classroom changes were usually required, other than the coverage of new curriculum materi-

als. In only one case did the career education project provide a framework for instituting fundamental reforms. None of our sample districts appeared willing to pick up the costs of project funding after the outside grants expired.

The bilingual projects were somewhat more complex; they attempted to deal in a novel way with the learning problems of a particular target group. Some of them attempted to use open classrooms or other nontraditional methods of conducting classes. They also created new demands on LEA administrators by making them recognize a potent new community interest group.

The reading projects, although confined to a single well-specified curriculum area, sometimes sought to achieve considerable change in instructional technique. All of our sites were urban districts which were supposed to be implementing some form of "complete reading program" based on the diagnostic/prescriptive method of instruction. Actually, several of the sites used their funding for much more limited purposes or to support activities that were only tangentially related to reading instruction.

The staff development projects were a more comprehensive attempt to improve teacher effectiveness—primarily through a program of in-service workshops and classroom technical assistance designed to confront participants with the limitations of traditional methods and to demonstrate the value of new behavioral change techniques. In some cases this training effort was coupled with some specific plan for modifications in the LEA's instructional program.

The classroom organization projects were the most complex attempt at change we observed. Three of the projects focused on strategies of informal education: multiage grouping, open education, and integrated curriculum. One involved team teaching and differentiated staffing, while another involved an alternative school—a street academy.

STUDY APPROACH

Each of the case studies was carried out by one or two researchers visiting the project site for several days to interview project participants and other district personnel, and to observe the educational program in both project and nonproject classrooms. From these interviews and observations, we drew inferences and made judgments about the factors that led to the initiation of the project, the quality of its implementation, and the impact it has had.

In organizing our report, we have chosen to characterize the process of innovation in three phases: initiation, implementation, and outcomes.[1]

Initiation includes identifying a need or opportunity for a particular project and specifying a strategy for carrying it out. It includes generating local support for the project's objectives, choosing a project strategy, and trying to get funds.

Implementation consists of making the project function in the local setting. It includes administration, training, materials development, planning, and evaluation, as well as all the decisions necessary to adapt the project and the local institutions at the site to each other's requirements.

The project outcomes are the effects—long- and short-term, direct or indirect—that a project has on the adopting district. These outcomes can include student

[1] See Vol. I for theoretical framework supporting this organization.

performance, classroom atmosphere, teacher behavior, or impact on the district's program. Their persistence or long-term impact is affected by the degree to which project techniques are continued after the federal grants are ended and disseminated to other schools or districts.

INITIATION

Initiation of most projects was motivated by either fiscal opportunism (a chance to obtain additional funds) or interest in fulfilling a specific local need. We did not find districts taking an R&D or experimental approach to innovation. Those projects that represented opportunity-based behavior generally lacked the commitment and support of the local administration and failed to result in significant change. Projects initiated in response to a local need, on the other hand, usually were strongly supported by the district, giving the project status in the eyes of participants and resulting in instances of significant change. Also, projects that addressed goals related to important district concerns were more likely to result in change than those that addressed less central local or federal concerns.

Most projects were based on information or treatments that were already known locally rather than using information derived from a search for alternatives. If staff members who were expected to implement the project were allowed to participate in the development stages, then there were usually fewer implementation problems, while projects that were designed by "outside experts" generally failed to gather support or achieve their objectives.

IMPLEMENTATION

Implementation occurs when the project plans confront reality—when participants attempt to carry out the proposed innovative strategy. As hypothesized in our review of literature on educational innovation (Vol. I), we found that implementation was essentially an organizational process of mutual adaptation between the project design and the institutional setting, and that implementation strategies had a significant effect on the project outcomes. Implementation was most successful when based on strategies that fostered mutual adaptation and permitted it to take place, specifically: on-line planning efforts and continuing reassessment of project methods; provision of extensive pre-service and in-service training for all participants; frequent, regular meetings of project personnel to discuss problems and share ideas; and the local development of project materials, as opposed to the utilization of commercially prepared packages. This latter activity provided an opportunity to "learn by doing" as well as a sense of identification with the project's goals and understanding of its precepts.

In motivating participants, intangible professional and psychological incentives were more significant than tangible incentives such as extra pay or credit on the district's salary scale, although the latter types of rewards were frequently used.

Elementary school projects were more successful than junior or senior high school projects. Also, districts with prior innovation experience were less likely to have implementation problems than those less experienced. But the existence of

several innovative projects in a single district often detracted from the attention paid a given project, and thus from its chances of success.

Other factors leading to more successful implementation included: the existence of a critical mass of participants in any given school who could provide each other with mutual support; strong administrative support from all levels of the system; a flexible administrative approach to unexpected contingencies; and classroom technical assistance to complement training or materials development components.

PROJECT OUTCOMES

The project outcomes of interest to this study were: the effects of the project on classrooms, teachers, and students; the extent to which the project treatments were continued after the special project funding ended; and the amount of dissemination which took place between the project schools and nonproject schools, both within the LEA and to other districts.

Although most of the projects we observed did lead to noticeable changes in project classrooms, the staff development and classroom organization projects had more effect on the atmosphere and activities of the classroom than did the more narrowly focused projects. These effects were most apparent in the lower grades. The classroom organization and staff development projects also resulted in the most significant and pervasive changes in teacher behavior and attitudes. When changes were made in only one part of the curriculum, such as reading or career education, these changes seldom affected other subjects, even when they were taught by the same teacher.

Although few, if any, of the projects which had completed evaluation studies could demonstrate significant gains in student achievement, some projects, particularly those involving classroom reorganization, did report improvements in student attendance, school-related attitudes, self-control, and confidence.

Our fieldwork provided some evidence that project continuation decisions are not made on project merits alone. In particular, formal evaluation seemed to have very little effect on the continuation choice. The initial commitment of the LEA administrators to the project appeared to be the dominant single factor.

We also found that projects which replaced existing practices were more likely to continue than those which merely supplemented the existing curriculum. Other factors which appeared to raise the likelihood of project continuation were: an emphasis on training rather than the introduction of new technology; training focused on practical classroom issues rather than theoretical concepts; local development and direction rather than reliance on outside consultants.

Only a few projects were actively engaged in dissemination activities. We observed very little evidence of "lighthouse" effects even within the host district. This was primarily due to lack of interest from nonproject schools rather than to lack of visibility for the exemplary projects. The most productive dissemination efforts appeared to occur where the disseminator was helping other schools or districts build up their innovative capabilities rather than attempting to replicate a specific model.

FEDERAL AND STATE PROGRAM MANAGEMENT STRATEGIES

State education agencies played an active role only in the state portions of Title III (85 percent of the funds) and Vocational Education (50 percent). In all of the other programs, the states showed little interest in the federally funded sites within their jurisdiction. The only exception was that some states with their own active bilingual programs attempted to assist or benefit from the federally sponsored projects.

Project selection procedures ran from open competition with a minimum of political interference under state Title III, to straightforward nomination procedures based on LEA characteristics, as in the Right-To-Read demonstration projects. The competitively generated projects evidenced a much greater degree of LEA commitment, probably because the competition itself required hard work by the applicants and because the selection boards' renewal procedures kept up the pressure on districts to perform.

Project monitoring ran from fairly strong under state Title III to nonexistent for the Right-To-Read demonstration projects or federal Title III. Projects supported by these latter programs diverged from their initial objectives more frequently than did the other programs. Most LEAs seemed quite perceptive about the degree of freedom they had.

Only in a few of the state Title III projects did the formal project evaluations seem to have any operational effect, and then largely at the personal insistence of the project monitor. For many of the other projects, the funding agency collected no useful feedback concerning project results, nor did the LEAs appear to use evaluation evidence. Termination or redirection of projects because of poor results appeared to be extremely rare.

In general, the states played a passive role in disseminating project results, leaving this up to the sponsoring LEA. Only a few states had a formal procedure for screening projects and disseminating the best of them.

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I. INTRODUCTION

This volume analyzes the process of change that characterizes innovations attempted by school districts using federal funds. The analysis, which is based upon field studies of 29 change agent projects, is one component of a Rand study sponsored by the U.S. Office of Education.

BACKGROUND OF THE CHANGE AGENT STUDY

During the 1950s and 1960s, two important initiatives, the National Defense Education Act of 1958 and the Elementary and Secondary Education Act of 1965, defined a new federal role in local education—large-scale support of federally mandated programs aimed at specified goals: subsidizing special curriculum developments, educating the disadvantaged, training young people for careers, broadening access to higher education, and encouraging innovation in the public schools, which is the subject of this study. Approximately 10 percent of the federal aid to public schools, currently exceeding $3.5 billion annually, is aimed at promoting educational innovations. These funds are spent, primarily by the U.S. Office of Education, through a number of avenues and with diverse strategies, including the so-called change agent programs analyzed in this study:[1] Elementary and Secondary Education Act Title III, Innovative Projects ($150 million annually); Elementary and Secondary Education Act Title VII, Bilingual Projects ($45 million); Vocational Education Act, 1968 Amendments, Part D, Exemplary Programs ($16 million); and Right-To-Read ($12 million).

Each change agent program has a distinct focus and management strategy. The largest of the programs considered here, Title III, is designed to improve the quality of public education both by introducing model practices that are new to American education and by spreading existing successful practices to schools that are not aware of them. The competition for Title III grants of three-year duration is open to almost any kind of project that local schools wish to propose. In 1973-1974, the first year of our study, 15 percent of Title III money was granted directly to local educational agencies (LEAs) by the Office of Education, and the remaining was allocated to state educational agencies (SEAs), who in turn made grants to LEAs. Other federal change agent programs are more narrowly targeted and have more specific funding criteria. Right-To-Read represents an attempt by the Office of Education to create a national educational priority for reading, particularly for disadvantaged students. The Right-To-Read demonstration projects, the program component addressed in this study, included a prescribed planning and management strategy in an effort to facilitate effective implementation. Vocational Education, Part D, was designed to create exemplary programs to enhance career awareness and readiness. Congress, believing that many SEAs were not able to promote signifi-

[1] Other federal programs, not studied here, also aim at encouraging innovations—e.g., certain programs for handicapped students, experimental schools, educational voucher demonstrations, Follow Through, elements of the Emergency School Assistance Act.

cant innovations, gave USOE the authority to fund local projects directly through the Part D program. Half of the Part D appropriations are allotted to the SEAs; the other half to USOE. Title VII (Bilingual Education) originally sought to provide model projects for the special needs of children whose English-speaking ability was limited. The program has subsequently also developed into an effort to maintain and encourage "cultural pluralism" in American public education, with strong political support from many people of Spanish-language origin.

Despite these differences in focus and management strategy, the change agent programs have a common purpose: the stimulation and spread of educational innovations. They also have a common policy instrument: the provision of temporary funds (3-5 years), which, though small relative to the budget of a school district (ranging from grants of ten thousand dollars or less to several hundred thousand dollars per year), are intended to fund new educational services, not to support existing practice. These programs also rest on common assumptions. They all assume more or less explicitly that American education should be doing better in respect to a variety of goals ranging from specific objectives such as student reading achievement to the broad concerns of student personality and social development. Moreover, the change agent programs assume that educational practices, procedures, and methods can be improved within the existing educational structure. Federal policy presumes that providing funds to a relatively small number of districts to try innovations will demonstrate the value of some of these innovations which will then be adopted selectively by other districts.

Numerous studies have evaluated, described, or analyzed innovative projects and federal programs designed to stimulate educational change.[2] These studies are mixed both in their research quality and in their findings. Anecdotal and single-case study evaluations usually claim considerable "success" for projects supported by federal funds. Yet quantitative evidence and careful fieldwork suggest something quite different:

- Variations in student outcomes have not been consistently related to variations in treatments, once nonschool factors are held constant.
- "Successful" projects have lacked stability and have not been easy to "export" from school to school or district to district.

The alleged ineffectiveness and instability of innovative projects might be dismissed either as premature—it may indeed be too soon to judge innovations that take many years to develop—or as subject to measuring the wrong student outcomes in the wrong ways—profound measurement problems surely plague assessments in this field. However, it is more prudent to assume that present policies and the assumptions underlying them need to be reexamined and, where appropriate, revised and redirected. With these objectives in mind, USOE asked Rand to undertake a several-year study to examine innovative projects funded by the various change agent programs,[3] and, in particular, to treat the following questions:

1. How should the degree, quality, and extent of innovation and dissemination of change in the public schools be assessed?

[2] Vol. I of this study reviews the literature.

[3] In this report, we refer to *programs* when describing the federal change agent initiatives, e.g., Right-To-Read. We refer to *projects* when describing the particular innovation selected by a school district.

2. How do school districts select, introduce, implement, incorporate, and spread different kinds of innovations?
3. How do differences in target groups, resource use, educational treatment, project strategies, and other characteristics affect the initiation, implementation, persistence, and dissemination of innovations?
4. How do differences in institutional and political contexts affect the initiation, implementation, persistence, and dissemination of innovations?
5. How, if at all, do differences in the relations among the characteristics of innovations and the institutional-political setting affect the initiation, implementation, persistence, and dissemination of innovations?
6. Do the different federal change agent program strategies have different effects on the initiation, implementation, and outcomes of local projects?
7. What should federal policies be toward educational innovation in light of the political, financial, and organizational constraints that the federal government faces in its dealings with the public schools?

CENTRAL PREMISES AND THEORETICAL FRAMEWORK

In order to study the questions listed above, we developed a theoretical framework—a set of hypotheses and assumptions—that has guided the research. The framework rests on two assumptions: first, that there are distinctively different stages of the innovative process and, second, that the institutional setting profoundly influences the nature and impacts of an educational innovation, as well as its likely permanence and dissemination.[4]

Stages of Innovation

We view the change or innovative process as consisting of three stages: initiation, implementation, and incorporation. The initiation stage in the life of an innovative project occurs when local school officials conceive and formulate plans, seek resources, and make decisions about which projects they should select and support. We hypothesize that the support and commitments made in the initiation period affect what happens when project implementation begins.

In the implementation stage, the project confronts the reality of its institutional setting, and project plans must be translated into practice. Many innovative projects fail or are disappointing because they are not implemented according to plan. But the issue of implementation is often more subtle and complicated than mere fidelity to predesigned means for attaining specified educational goals. We hypothesize that as a consequence of the institutional characteristics of local school systems the implementation of those educational innovations that result in significant change intrinsically involves a process of mutual adaptation.[5] Thus, the initial design of an

[4] The theoretical framework is justified and elaborated in Vol. I.

[5] Vol. I defines an innovation as a plan with a statement of goals and means designed to change standard behaviors, practices, or procedures. Many educational innovations tend to have abstract goals, to lack specificity and clarity of means, and to have considerable uncertainty as to the relationship between means and ends. Such uncertainty makes it desirable for the innovation to become developed, revised, or, in short, adapted to the realities of its institutional setting. Accordingly, we define implementation as the change process that occurs when an innovative project impinges upon an organization.

innovative project becomes adapted to the particular organizational setting of the school, classroom, or other institutional hosts; at the same time, the organization and its members adapt to the demands of the project. Therefore, many educational innovations may fail to have desirable effects because the project is not adapted to the institutional setting or vice versa.

The term "incorporation" is used to denote the final stage in innovation—when an innovative practice may lose its "special project" status and become part of the routinized behavior of the LEA. Incorporation represents the most serious commitment on the part of the district, as federal "seed money" is withdrawn and decisions must be made about not only *whether* but also *what components* of and on *what scale* a project should be continued within the district. We believe this decision may involve more than the success or failure of the project during its trial period. Economic, political, and organizational pressures and constraints may play major roles in determining the innovation's future.

Not only do these three stages involve somewhat different activities and decisions, but the significance of actors and issues also changes from one stage to another. Thus we believe that a key to designing and assessing federal, state, and local policy lies in understanding how the stages of innovation work in different locations, for different innovations, and for the various change agent programs.

Factors Affecting "Outcomes"

The change process itself is important, but systematic analysis also should identify major factors affecting the "outcomes" or effects of innovations. The first research problem is to select or devise suitable measures of outcomes. Since federal programs and local and state policies aim at improving the education of children, the most direct and natural measure of the effectiveness of an innovative project would be changes in behavior, attitudes, or test scores of students. However, for the purposes of the study, it was both premature and inappropriate to measure student outcomes. The innovations were generally new to the district and consequently require an extended period before their true effects can be assessed. Moreover, these projects differed considerably in their focus, goals, methods, and assessment procedures. Therefore, there was no practical way to compare, for example, outcomes of bilingual reading projects with projects dealing with remedial mathematics.[6] More important, innovations may not be implemented according to plan. The *first* issue before assessing longer-range student impacts is thus to measure the effectiveness of the project's implementation.

We studied three types of effectiveness measures or "outcomes":

1. *Implementation*: (a) the relative extent to which project goals are achieved, (b) the type and extent of change in teacher behavior, and (c) the extent to which the project as proposed compares with the project as implemented.
2. *Continuation*: the extent to which the project is continued by the LEA after federal funds are withdrawn.
3. *Dissemination*: the extent to which the project is diffused to other schools in the district or to other districts.

[6] Vol. I of this study reviews the literature on the measurement of student outcomes.

The change agent study consists of two phases. In phase one, which is covered in the first five volumes of this series, we deal with projects that have not yet completed their period of federal funding; consequently, the analyses here are limited to implementation outcomes and expected continuation (plus some preliminary information about dissemination).[7]

We believe that three interrelated sets of factors affect these outcomes:

- Characteristics of projects
- Federal and state policies
- Institutional settings

Most project evaluations investigate only the relationship between outcomes and the *educational technology or method* that is characteristic of the project. Yet two projects with the same educational method can be implemented in quite different ways, leading to different outcomes. This means that projects also can be characterized by their *implementation strategies*—that is, the design decisions about what should be done to implement the project, how it should be done, and by whom. We hypothesize that implementation strategies will have major effects on project outcomes.

Because project evaluations usually are case studies of LEA projects funded by the same federal change agent program, they tend to treat federal policy unsystematically. This study examines four federal programs, each with a different aim and different management strategies. This provides an opportunity to compare innovative projects funded by different programs and an opportunity to assess the extent to which project outcomes are explained by differences between the federal programs.

The most serious omission of most evaluation literature is its failure to take into account the institutional setting in which innovations operate. Such major elements of the institutional setting as demographic, economic, and political conditions of the district, community influences, student characteristics, and organizational characteristics are usually neglected. Though the analysis will examine all relevant institutional elements wherever possible, the research design and analysis have been predicated on our belief that organizational characteristics of LEAs have major impacts on innovations and that federal, state, and local policies largely ignore these characteristics.

OVERALL RESEARCH PLAN

The theoretical framework thus suggests that two areas need to be studied if the broad questions implied by federal change agent policy are to be examined systematically: first, the process of change and, second, the factors (namely, project characteristics, institutional setting, and federal and state policies) affecting the innovative project. Accordingly, the first phase of Rand's research efforts consisted of two principal data collection activities (Appendix A to Vol. IV provides a more detailed description of the overall study design):

[7] The federal Vocational Education projects (9) and half of the state Vocational Education projects (14) were the only projects in the sample that had completed their federal funding before the beginning of our research.

1. A nationwide survey of 293 change agent projects in the last or next to last year of federal funding was administered in November and December 1973 and January 1974 by the National Opinion Research Center of the University of Chicago, under a subcontract with Rand. The survey, which included personal interviews with project participants at all levels of the LEA, was designed to elicit information about factors affecting a sample of innovative projects funded by the various federal change agent programs.
2. After the survey was completed, during April and May 1974 the Rand staff conducted 29 field studies of projects from the survey sample. The field studies, consisting of observations and interviews in project schools, were designed to explore and compare the process of change in a number of institutional settings for innovative projects with different characteristics, funded by the various change agent programs.[8]

Because data collection had to be completed within the 1973-1974 school year, the survey and field studies could not be fully integrated (in the sense that the results of the survey would establish hypotheses and important research avenues that the fieldwork would then explore in depth). However, the two efforts were designed to complement and reinforce each other. The survey's quantitative information about structural factors affecting outcomes has provided a general perspective for the fieldwork's qualitative, small-sample information about process; the fieldwork's in-depth analysis has added realistic detail that has been helpful in interpreting the survey data. In short, the two efforts tend to validate each other.

The second phase of the change agent study, drawing on the preliminary findings and the data of the initial year, will focus on describing what happens when the federal funding for the innovative project is terminated. Accordingly, the Rand staff will revisit projects in the first-year sample which were in their last year of federal funding. Thus, we will be able to examine hypotheses about continuation and dissemination that are raised by the first year's findings.

FIELDWORK METHODOLOGY

The fieldwork was undertaken to provide information about the common processes and interrelationships that influence local efforts to bring about change. Identification of these common processes and interrelationships requires resolution of a number of central questions and issues for each project under study. First, what sort of innovation is actually being undertaken? The term "innovation" is used rather broadly to cover a great diversity of activities and consequences. Planned educational change can vary from the simple introduction of a new textbook, to marginal changes in staff responsibilities and relationships, to significant changes in teachers' classroom behavior and activities. The differences in strategies and objectives not only mean that educational innovations will differ in content, but they also imply variation in such important aspects of change as amounts of:

[8] To place these major empirical efforts within the context of federal and state policy, the following additional steps were taken by the Rand staff: telephone interviews with 54 state education agency (SEA) officials in 18 states; visits to nine SEAs to interview various state officials; and a series of personal discussions and interviews with OE, HEW, and Congressional staff concerning federal policy issues in change agent programs.

- Technical and administrative skill required
- Risk, as seen by the persons concerned
- Parent and community response or interest
- Effort required
- LEA resources required to continue the project
- Impact on participants
- Institutional change required
- Support and commitment required

Further, many terms describing educational treatments and goals are often imprecise. For example, terms such as "individualized instruction," "needs assessment," "staff development," and "bilingual education" are often used to cover a wide variety of somewhat different educational practices and objectives. Thus, given the possible variation in the activities, scope, and objectives of innovations as they are described in project abstracts and evaluation reports, the first task of the field researcher is to understand precisely what is being attempted by the local change agent project.

A second area of concern is understanding how the institutional setting influences the project and identifying how the innovation and members of the school community affect each other. Answers to questions about the significance of the local setting often involve integration of somewhat different views of the change process and of project evolution.

The political and institutional atmosphere surrounding educational innovation sometimes makes it difficult to put together an accurate picture of what really happened in the course of an innovation. For example, at the district level, administrators may feel compelled to gloss over discrepancies between what the project is actually doing and what was proposed to the state or federal funding sources. They also may be motivated to promote the image of their district by inflated claims about project accomplishments.

Within the district, somewhat different views may also exist among teachers or project administrators. Such varying perceptions of the significant factors in the evolution of a project are often determined, not merely by the characteristics of the innovation itself, but also by the personalities and particular involvement of the staff and by the administration's personnel management skills. The result of these and other political or organizational factors—from the analyst's point of view—is frequent disagreement about project goals, treatment, and impact, or a distorted picture of project activities and history.

A third area of interest concerns project implementation or mutual adaptation. In order to assess the quality of project implementation, it is necessary to determine the *extent* to which mutual adaptation took place, and *how* and *why* it occurred. For example, project modifications that appear to be similar—modification in goals, for example—may have resulted from different motivations and concerns, and may have different consequences for eventual project outcomes. For instance, project goals may have been modified to conform more closely to the needs and priorities of the local setting. Or they may have been modified because of disinterest or lack of involvement on the part of the staff. Understanding project implementation or mutual adaptation essentially involves tracing out an "implementation path" for the course of the change agent project, and relating activities and decisions to the quality of project implementation and project outcomes.

Fourth, what outcomes of the change agent project can be observed? As we explained above, we were not primarily interested in assessing the impact of change agent projects on students, although evaluation evidence was examined where it was available. Instead, our major research interest lies in understanding the impact of change agent programs on educational practices. Will the district continue the program in part or whole after federal funds are withdrawn? Have project practices spread within the district? To other districts? Has the project resulted in unanticipated or "spinoff" effects?

Design Considerations

Two primary considerations influenced the design of our fieldwork: the state of present knowledge and theory about educational innovation, and our interest in determining differences in the effects of the federal programs included in this study.

Most evaluations of educational innovation focus on how new practices affect student outcomes, and relate program inputs to program outputs. Such evaluations typically do not look at the interaction of a project with its institutional setting, or at the process of implementation. Consequently, these studies do not furnish much empirical evidence about the process of change, or about the components of success and failure.

The theoretical literature on planned change provides little more help since, at present, there exists no analytical understanding of implementation. Vol. I of this study represents an attempt to move toward a systematic understanding of innovation in education. However, in the absence of consistent empirical or theoretical understanding of the change process, this proposed theoretical framework is necessarily very general, and suggests a number of alternative hypotheses about the change process. Thus, both the survey and fieldwork components of the Rand study are exploratory; they have been designed primarily to generate hypotheses, not to test them. The study design for the fieldwork, then, was not constructed with experimental or quasi-experimental standards in mind. We were less interested in demographic or geographic representativeness, for example, than in a project's apparent promise to provide interesting data about the process of change.

The study design was further shaped by our wish to gather data about the effects of different federal policies. Therefore, the sample was drawn to include enough projects from each federal program to allow us to begin to assess the extent to which a particular federal policy (as distinguished from the project site or project focus) had an impact on project outcomes.

Sample Selection

In order to reduce the variability that might be due to differences in project objectives and treatments, we elected to focus on five kinds of projects: bilingual education, career education, reading, staff development, and classroom organization. The first three reflect the focus of three of the federal programs in our study: Vocational Education, Part D; ESEA Title VII; and Right-To-Read. The last two categories represent particular types of Title III projects. They were selected because of their ambitiousness and complexity, and we expected they would provide rich data concerning project implementation and the process of change.

An additional reason for organizing the fieldwork sample around substantive

areas was to allow the staff to become completely familiar with the important aspects of one innovation. This would allow the staff to concentrate on variations in institutional settings and implementation strategies at each site.

Having defined these five substantive areas, we elected to study six projects per topic, or a total of 29 projects drawn from the original survey sample of 293 change agent projects. The decision to study 29 projects was made on the basis of preliminary fieldwork and our resource constraints. Our trial visits to similar change agent projects not included in the survey sample indicated that 3-day site visits by 2 researchers (6 staff days) were enough to interview key participants, observe project operations, speak with members of the community, and so on. We devoted about 700 staff days to the case study efforts—planning site visits, write-ups, analysis, and writing the final report. The distribution across treatment areas was subsequently modified to reflect the availability of projects and the different levels of complexity in the topics. (We found that classroom organization projects, for example, required more time than did the more straightforward career education projects.)

The final sample of 29 change agent projects comprised 6 bilingual education projects, 7 career education projects, 6 reading projects, 5 staff development projects, and 5 classroom organization projects. One staff member was assigned overall responsibility for each of the five types of projects, including selection of projects to be studied. In selecting projects, each team leader reviewed project abstracts for all relevant projects, reviewed the project material collected at the project site by the survey interviewers, read the survey responses, and, in some instances, made telephone calls to the project site if issues of project design or treatment remained unclear. Each research team also reviewed the empirical and theoretical literature relevant to its type of project.

Because we were interested in visiting projects which could provide fruitful insights about the change process and successful implementation, we avoided including projects which, on their face, appeared to be poorly designed or unsuccessful. Previous studies of educational innovation and our own experience led us to expect that we would find few truly "exemplary" projects, and very few innovative projects. Furthermore, our experience with project evaluation reports led us to anticipate frequent discrepancies between the data reported in project proposals and evaluations, and the reality of project operation and outcomes. Therefore, we expected to see unsuccessful projects regardless of the screening device we used. But we hoped that this method of project selection would improve the chances of finding significantly innovative and successful change agent projects. Indeed, we hoped that this screen would result in an oversampling of "successful" projects. Given the state of the art, we believed there would be more to learn for policy by studying success than by analyzing failure.

Data Base

This selection procedure resulted in a project sample of the following characteristics:

BILINGUAL EDUCATION

Focus. The bilingual projects, sponsored in whole or in part by Title VII, aimed at improving English communication abilities. These projects also attempted

to enhance second-language abilities and appreciation of the culture of the country of origin. As they matured, bilingual projects were designed to affect a large number of students in a given school, not just non-native-English speakers. Most of the material in Title VII projects was presented by new bilingual teachers or aides hired specifically for the project, rather than by teachers who were in the school before the project began. The case studies were conducted at six sites.

Location and Size. West Bluff, a town of 7000 located in a sparsely populated section of a western state, is a center for farming, ranching, mining, and tourism. Its bilingual project served 400 students in grades K-8. The project was funded at $150,000 a year and was in its third year of operation.

West Bay is in an agricultural area of a coastal western state. Approximately one-third of its 32,000 population is predominantly low-income Mexican-American. The West Bay Bilingual Project was funded at $225,000 annually, was in its third year of operation, and served 700 students in grades K-12.

Metropolis, a large industrial city of the Southwest, has a population of almost 1.5 million. Its bilingual program was funded at $230,000, was in its fifth year of operation, and served 1300 students in grades K-4.

Bay City is a seaport community of 600,000 on the East Coast. Its bilingual program, in its fifth year of operation, served 250 students in grades K-6. It was funded at $90,000 a year.

Seaside is a large western city and a major industrial center. Its Spanish-speaking population is predominantly Mexican-American. The Seaside project served 2000 students, grades K-6, was in its fourth year of operation, and was funded at $500,000 annually.

Grand Fork is a city of approximately 150,000 in a midwestern state. The latino population includes Cubans, Dominicans, Mexican-Americans, and Puerto Ricans. Its bilingual project served 250 students in grades K-8. The Grand Fork project was funded at $250,000 annually and was in its second year.

CAREER EDUCATION

Focus. Career education projects primarily involved the development and use of new curriculum materials which supplemented whatever career education materials the LEA had been using in the past. Other career education activities involved field trips, counseling, work experience programs, or career information centers—each a separate activity somewhat isolated from the rest of the school program. Career education programs were launched with the broad purpose of helping children draw connections between what they were being taught and what they would have to know to earn a living.

Location and Size. We visited seven career education projects. Tip County is a rapidly growing southern suburban area with the largest school system in the state. The community is middle class to upper middle class; white-collar employment is provided in a neighboring large city. The black student population is less than 10 percent. Its career education project is a federally administered project funded at $150,000 a year. The project was in its third year of operation.

Coaltown, a small isolated mountain community in the heart of the Appalachian coal belt, has become relatively prosperous since the oil shortage. Although the minority population is small, there is a surprisingly high fraction of welfare

families. This federally administered career education project served 1300 students, was funded at $150,000 annually, and was in its third year of operation.

Midville is a prosperous small city in the heart of the upper Midwest industrial region. The community is blue-collar and predominantly middle class. Blacks constitute about a quarter of the school system's 14,000 students. The Midville career education project is a state-administered project in its third year of operation. The project had a target group of almost 8000 students and was funded at $100,000 a year.

Eastplace is a small northeastern town of about 35,000. Although located near a major metropolitan area, the community—largely working class or lower middle class—works locally in light industry. The Portuguese constitute the largest minority group (8 percent). The Eastplace career education project is state administered. It served 4500 students, was in its third year of operation, and had an annual funding of $100,000.

Bikson County, located in the "New South," is composed of urban, suburban, and a few rural communities, such as Victor, which was selected for the career education project because it was the most economically depressed and isolated part of the county. Blacks constitute one-third of the population and half of the school enrollment. The career education project served 5000 students, was funded at $150,000, and was in its third year of operation.

Lakewood, one of the largest cities in the country, is located in the upper Midwest. It is heavily industrial and is divided east-west between blacks (one-third of the population) and whites (largely ethnic). The Lakewood project was funded by both state and federal funds, $100,000 respectively. The project served 13,900 students through the state portion and 5000 students through the federal portion. Lakewood has received federal funds for three years, and state funds for one year.

Northshore is a large seaport city in the West. Its central population of over 500,000 is predominantly working class, with significant fractions of blacks and orientals. Northshore had both state and federal career education projects. The state portion of the project was funded at $75,000, and the federal portion at $150,000 per year. The project served 16,500 students under the state portion, and 1800 under the federal portion. Both state and federal support were in the third year.

READING

Focus. The selection of reading projects was limited to urban districts attempting to implement a "complete" reading program that utilized the diagnostic/prescriptive method of instruction. We restricted our reading sample to urban sites because large cities are where low reading achievement is thought to be a more critical problem and where change is believed to be more difficult to achieve.

Although confined to a single curriculum area, these reading projects have generally sought considerable change in the instructional style of participating teachers. This change is brought about primarily through in-service training and the use of reading specialists who work to help teachers develop their own techniques and materials, adaptable to the needs of their own students. Some of the less complex projects make extensive use of reading specialists, textbook changes, or pull-out remedial programs which add little or no burden on the regular classroom teacher.

Some of the projects varied considerably in practice from the description in their abstracts. One of the Title III projects used its funds primarily to assist in

changing to open-space schools. Another used them to adopt new basal texts incorporating a simple diagnostic/prescriptive technique. Three of the Right-To-Read projects attempted to develop workshops and delivery systems for in-class follow-up to implement diagnostic/prescriptive reading. The fourth expanded an already functioning reading system to two additional schools.

Location and Size. We visited six reading projects.

Adamston, a northeastern city of 400,000, has long been a center for transportation, a distribution point for many of the nation's leading products. The population is moving away from the decaying, often violence-prone, inner city. Adamston's Right-To-Read program, in its second year of operation, was funded at $100,000 annually, and served 400 students in grades K-2.

Middleton is an old northeastern seaport city with many diversified industries. Its most serious inner-city problem is racial strife in its schools. Middleton had a Right-To-Read project, which was in its second year, was funded at $100,000 annually, and served 2300 students.

Rockton, a midwestern city in a predominantly agricultural state, is a major manufacturing center, with a population of about 800,000 made up of Germans, Poles, blacks, and Chicanos. The Rockton Right-To-Read program was in its third year and was funded at $100,000 annually. The project target group was the student population in four elementary schools and supported the addition of 4.4 reading teachers to these schools.

Brickton, a seaport city in the Northeast, has been largely rebuilt in the last decade and now supports a diversified manufacturing industry. Almost half of its population of over 1 million is black. The city has long been considered a center for learning. Its Right-To-Read project attempted to have a citywide effect on reading and so describes its target group as 225 schools. The Brickton project was in its third year of operation and was funded at $100,000 a year.

Lindaton is a middle- to upper-middle-class residential suburb (population 50,000) of a large midwestern city. The school district is known for the quality of its teaching staff and for its innovative practices. Many blacks are now migrating to Lindaton. The Lindaton reading project is funded by Title III, Section 306, at $89,000 annually. The project was in its third year of operation and served a target group of 5300 students in grades K-7.

Able is an older northeastern city with its share of inner-city problems. A Title III, Section 306, project (Baker) was in its third year, served 350 students, and was funded at $190,000 annually.

STAFF DEVELOPMENT

Focus. The staff development projects had a general aim of improving teaching effectiveness—usually with a heavy focus on human relations and behavior modification techniques. The projects typically involved several weeks of training for selected teachers, aimed at exposing flaws in their traditional style and providing a new approach. Sometimes this training was associated with more ambitious district plans for changing its educational program.

The staff development cases demonstrated a range of techniques—from sophisticated system-engineered development strategies to the unadorned provision of written materials to volunteers—and a range of consequences associated with teacher-focused change efforts. Two projects involved classroom interaction by trainers

with little or no material support. Two other projects relied almost exclusively on materials (workbooks, self-instructional sequences, etc.). The site of training varied from special laboratory situations at district headquarters to off-campus locations. Trainers ranged from outside "one-shot" consultants to teacher-peers on temporary assignment as trainers.

Some development efforts were targeted on particular groups of teachers, while others had no focus except on the faculty as a whole. In three places, the project team had the total support of the system's leadership. In others the intervention subverted that leadership. Interestingly enough, a couple of projects were applied to faculty populations which felt no need for the project and had no desire to change.

Location and Size. We visited five staff development projects.

Lewison is a small, essentially rural community near a major midwestern city. Its population is largely white, blue-collar, and working class. The Lewison staff development project was in its second year of operation. The project was funded at $100,000 annually and focused on a target group of 57 teachers in the district.

Dodson, a large southwestern city, has a population that is 40 percent black, 40 percent Anglo, and 20 percent Chicano. Many of the problems that are associated with urban education are reflected in the Dodson school system and magnified through the state and regional culture. The Dodson staff development project was in its third year, was funded at $240,000 annually, and attempted to reach all of the teachers in the district.

Wagonia is an outpost of a manufacturing company's empire in the Middle West. The school system serves 35,000 students in 75 schools. Although surrounded by farm country, Wagonia is urban. The staff development project in Wagonia was in its second year, was funded at $83,000 a year, and served 60 teachers in grades 7-9.

Bloomvale, a suburban town within easy commuting distance of a large northeastern city, has grown dramatically in the past two decades to its present population of approximately 30,000. It is an all-white, solidly upper-middle-class community with a school population of about 6700. The staff development project in Bloomvale was in its third year, was funded at $20,000 a year, and had a target group of 300 teachers.

Metro City, part of a large northeastern metropolitan area, consists of a complex of enormous, mainly high-rise apartment buildings. Its residents have expressed a concern to create, maintain, and protect the schools. The Metro City staff development project was in its third year, was funded at $264,000 a year, and served all of the teachers in the entire educational park complex, grades K-12.

CLASSROOM ORGANIZATION

Focus. The Title III projects which we have grouped under the general heading of classroom organization were somewhat unique in that they typically involved a complete cross section of the student body, included several or all subjects, and attempted significant change in most of the classroom teachers' activities. Further, the changes supported by these projects—team teaching, open classrooms, multiage grouping, alternative schools—generally represented a clear change from previous and more traditional district practice. These changes were usually supported by intensive in-service training efforts to assist the staff in implementing the change.

Location and Size. We visited five classroom organization projects.

Eastown, a district which undertook an open-education project in two of its elementary schools, is a typical northeastern suburban community, with one-family neatly landscaped homes. The people are politically conservative, and the school population of 12,000 is almost entirely white. The project was in its third year, had an annual budget of $75,000, and served 850 students in two K-5 schools.

Centerville, a small farming and academic town located in the rolling hills of the upper Midwest, used Title III funds to support a project of differentiated staffing and team teaching. People in this district earn their living at a small prestige college, on farms, as tradesmen, or as professionals. A third of the town's population is black. The Centerville project was in its third year, was funded at $150,000 a year, and served 650 students—half of the students in each of three elementary schools and all of the students in one junior high school.

Sandwood is one of the largest cities in the Southwest, sprawling over a wide area. The school population of 125,000 represents a wide range of socioeconomic status and a large number of children from families with a high rate of mobility, Mexicans, and more recently blacks. The Sandwood Title III project, which was in its third year, served 800 students, was funded at $260,000 a year, and attempted to combine multiage grouping and open-education strategies.

Seaside is another large sprawling southwestern city. The school under study, Roosevelt, is located in a middle- to upper-middle-income area that has been stable and predominantly Jewish. Today, black professional families are moving in and white families out, at a transiency rate of 50 percent. The Title III project in operation at Roosevelt, like the Eastown project, had as its objective changing an entire elementary school over from traditional methods to open-classroom practices. The project was in its third year of operation, received $90,000 a year in Title III funds, and served 600 students.

Northwood, our fifth classroom organization site, is an important city in the Northeast. Its population of over 100,000 is predominantly white Irish Catholic and is engaged in shipping and trade. As the old downtown area decays, the whites move to the suburbs. Blacks constitute a tenth of the city's population and a third of that in public schools. This project used Title III funds to support a storefront, alternative secondary school for high school dropouts. The project has been receiving Title III funds for two years ($120,000 annually) and serves 125 students.

Research Activities

Two devices were utilized to ensure that the case studies of these substantively different projects would provide generally comparable data: a broad research guide and staff training sessions. The research guide we developed (presented as Annex A to this volume) drew on the conceptual framework described in Vol. I. This research guide was pretested by members of each case study area during a week-long visit to one of two major districts, each of which contained the full spectrum of projects represented by our study. The guide was revised based on this preliminary field experience.

[illegible] the fieldwork procedures were pretested, all of the staff participated in a three-day workshop that was designed to work out common definitions and perspectives for approaching particular problems. Midway through the fieldwork, a one-day meeting was held for all of the field research staff to coordinate impressions and to ensure that all issues of interest were being covered.

Neither the research guide nor the training sessions were intended to constrain the staff to follow a rigid or identical data collection plan. Instead, they were intended to provide comparability in the issues addressed, in the terminology used, and in the types of data collected within a broad conceptual framework and analysis plan. The staff was explicitly given flexibility to pursue idiosyncratic but potentially important factors at each site.

Site Visits

After the projects had been selected, the team leader called the project directors to request permission to visit the project, to discuss the general framework and focus of the study, and to make tentative plans for the visit. Before visiting a project, the research team reviewed all of the project documents collected by our survey interviewers, read the survey responses, and examined SEA or federal documents relevant to the project in question.

Each site visit usually began with an interview with the project director, attended by both members of the research team. Following this initial briefing, the team split up to observe project classrooms or facilities, to observe nonproject classrooms where this was appropriate, to talk with project participants and members of the central administration, and to meet with members of the community (such as newspaper reporters and parents). Most of these interviews lasted approximately 1½ hours. Informal discussions with students were often conducted during classroom observation periods. A number of our site visits coincided with evening meetings of interest to the school community—PTA, the school board, Title III advisory board, and the like. Whenever possible, the research team attended these meetings and talked with participants.

Our field visits were facilitated by the fact that the staff had already read all available project material and survey responses before entering the district. Consequently, little time had to be spent gathering background information on project characteristics. The staff was able to focus fairly quickly on questions of project initiation, the factors that influenced project development and implementation, and the characteristics of the institution and the project that participants thought were critical in explaining project outcomes.

Field notes were dictated at the end of each day. Case studies of each project were then written drawing on these notes and upon the documentary evidence collected for the project—evaluations, proposals, budget reports, newspaper clippings, and so on. (See Annex B to this volume for an illustrative listing of the material collected for one project.) The staff member responsible for each treatment area then reviewed all of the case studies and prepared a synthesis of findings for innovations in that area. The syntheses and the case studies, which are published separately as appendixes to this volume, then served as the basis for the main body of this report.

SCOPE AND LIMITATIONS OF THE ANALYSIS

This report is a descriptive summary and a synthesis of the 29 case studies we conducted in the first year of the change agent study. It is organized around the

conceptual framework for the change process that is described in Vol. I. Since that volume provides the theoretical context for the entire study, we assume that the reader is familiar with that framework. The findings presented here are those that appear most consistently and compellingly throughout our case studies; findings that are particular to any one of the five innovation areas can be found in the synthesis section of the appropriate appendix or in the appended case material itself.

Three general limitations of the analysis presented in this report should be made explicit. First, since the fieldwork was designed to be exploratory, the analysis that follows attempts only to describe and interpret the processes that were common to the projects we visited—not to make statements about innovation in education generally.

A second limitation is related to the first. We have made no attempt in this analysis to give equal reference to the case study material we gathered.

The reader will notice that several of the projects are cited far more than others, and that some are not mentioned at all. Our unrepresentative use of our case data stems from the general purpose of the research—to begin to understand the process of innovation systematically—and from the nature of the data themselves.

The projects we visited varied significantly in terms of their *centrality and complexity*. By project centrality, we mean the extent to which an innovative practice seeks to change the goals, norms, or patterns of behavior that are perceived to be core or central to the institutional setting of the school. Or, viewed another way, centrality refers to the amount of perceived displacement of central and routinized behavior that is expected to accompany implementation or incorporation of an innovation.

Project complexity refers to the extent to which a project proposes a relatively complicated, far-reaching treatment and the extent to which that project attempts to affect the behaviors of a number of groups within the system. Complexity thus assumes a fairly high level of coordination. Project complexity may vary along the following dimensions:

> **Target Group Focus.** The smaller, more homogeneous, or specifically defined the target group, the less complex is the project. The most complex projects, for instance, involved the entire student body or an entire classroom.
>
> **Curriculum Focus.** The smaller the area of curriculum involved (reading as opposed to open education, for example), the less complex is the project.
>
> **Behavior Focus.** The broader the change in teacher behavior and attitude aimed at, the greater the complexity of the project.
>
> **Integration.** As used here, this last factor indicates the degree to which the activities constituting an innovation are interrelated, both among themselves and with the other activities of the district's educational program. The greater the amount of integration required for project activities, the more complex the innovation.

The data concerning common processes and activities that were generated by highly central and complex projects provided much richer insight into the change

process and consequently were given greater weight in our analysis. That is, the process of implementation we observed in a classroom organization project not only had much more to tell us about the change process than did similar observations in some of the very narrow and ancillary career education projects, but these data also assumed more significance in our analysis because the projects were inherently harder to carry out.

Consequently, the case study data that are used throughout the text to illustrate our findings are drawn from those project studies which we believed had the most to contribute to our understanding of the change process. Any attempt to tabulate or quantify our findings across the case studies, then, would incorrectly imply that all of the case data had been given equal weight in our analysis. Given our sampling procedures and the variation in the projects we visited, we believe that quantification—or implicit quantification—of our data would be neither meaningful nor methodologically sound.

The third limitation is related to the stage of our research. The findings and hypotheses presented in this report are based on data collected in the first phase of an ambitious and complex study of federal change agent programs. The second phase of the study will draw heavily on the experiences of this first phase. Consequently, it should be stressed that this report describes an *interim* analysis and that we expect our findings to be refined and modified by our subsequent work.

II. INITIATION

Project initiation is the first phase of innovation; it includes identification, adoption, and design of a particular change agent strategy. Specifically, the initiation stage includes generation of support for a proposed innovation within the LEA; identification of the objectives and strategies which will comprise the project design and focus; preparation of change agent project proposals; and the operational planning and programming which take place between the time a district can assume it will receive outside funding and the time when project activities must be carried out.

This first phase of the change agent project's life cycle is of particular interest to policymakers. It is then that federal programs appear to have the greatest potential to affect projects. During this phase local school personnel formulate their response to the different explicit and implicit incentives contained in the various federal change agent programs—from the noncategorical, competitive Title III program to the targeted Title VII program. We observed that these different federal programs tapped somewhat different local interests, which in turn often led to significantly different expectations for project outcomes, and to different courses of implementation or continuation.

The following sections discuss the incentives and motivations that were characteristic of the change agent projects we visited, the import they had for the various initiation activities themselves, and their consequences for the future of the innovative project.

WHY ARE PROJECTS INITIATED?

The "decision to adopt" an innovation has long been of interest to analysts of planned change and diffusion. Four alternative paradigms have been proposed to explain the behavior and motivation of potential adopters:

1. The Problem-Solving Model, which focuses on user needs, and emphasizes search and selection processes.
2. The Social Interaction Model, which focuses on patterns of diffusion, and stresses the importance of information about "better" practices as a stimulus to change.
3. The Research and Development (R&D) Model, which assumes an ongoing search for more effective practices and outlines a rational sequence of goal setting, search, planning, implementation, and evaluation. Included in this model is the "experimental" adoption of new practices.
4. The Linkage Model, which draws upon the preceding three but points to the potential contribution of outside agencies—or linking agencies—such as the SEA, regional labs, nearby universities, or USOE, in promoting and assisting change efforts.[1]

[1] See Ronald G. Havelock, *The Process and Strategy of Beneficial Changes: An Analysis and Critique of Four Perspectives*, Institute for Social Research, Center for Research on Utilization of Scientific Knowledge, University of Michigan, Ann Arbor, Michigan, n.d.

In addition, there is a fifth "model" of change or adoption which is acknowledged by funding agencies and grant recipients alike, but which has not been dignified by formal description in the research literature: opportunism, where the dominant stimulant in local initiation of innovative projects is simply the availability of outside dollars.

At the broadest level, four factors interact to spur the initiation of change agent projects: the availability of a "good idea," the availability of federal funds, local needs, and the incentives of individual actors. In the projects we visited, the weight and particular significance of each of these factors in stimulating project adoption varied from district to district. But, in general, the initiation process we observed was characterized to a greater or lesser extent by two of these views of adoption: opportunism and problem-solving.[2] In only one or two of the 29 projects we visited could the local initiation process be characterized by the social interaction or linkage models of change. None of the projects in our sample evidenced an R&D approach to change. Local schoolmen generally did not initiate change agent projects in response to new ideas or information from outside the LEA, nor did they follow an experimental or even quasi-experimental R&D approach to planned change. In fact, the projects we observed displayed a remarkable *lack* of experimental interest; they were not initiated to see if some totally new program would work. Instead, an LEA usually initiated projects in response to locally perceived needs, projects with which the district or the main participants already had experience, or projects suggested by federal funding guidelines.

The availability of special project funds has become an accepted fact of life within most sizable LEAs. Indeed, many medium to large districts employ a special staff or a federal program officer whose only job it is to identify and apply for special state or federal funds. The availability of federal funding was seen as an essential factor in initiating the change agent projects we observed—either as a solution to an identified need or as an end in itself. Local administrators said they could not have undertaken projects of the size and scope of the change agent projects without outside funds. But the incentives which prompted districts to apply for these funds varied and led to different change agent project histories.

The clearest examples of simple opportunity-based behavior, in which projects were initiated for the most part just because the money was available, occurred in the Right-To-Read and career education programs we visited. In both cases USOE assumed that all districts had similar general needs, and detailed proposal models were readily available or were not required at all. Little prior commitment on the part of the recipient district or participating schools was required. In the Right-To-Read demonstration projects, for example, districts received money even before any plans were formulated for how the funds would be spent. This procedure was intended to provide maximum flexibility to the LEAs in using those special funds. But it is not surprising that some districts tended to see Right-To-Read as a grant-in-aid, and sometimes used these funds to support local priorities, not the special program specified by Right-To-Read guidelines.

Projects generated essentially by opportunism were characterized by a lack of interest and commitment on the part of local participants—from district adminis-

[2] Since none of these problem-solving types of initiation activities in our field sites included serious search activities, or consideration of alternative strategies, these activities do not comprise the traditional —and essentially rational—problem-solving paradigm.

trators to classroom teachers. As a result, participants were often indifferent to project activities and outcomes, and little in the way of serious change was ever attempted—or occurred.

Those projects which came closest to the problem-solving model were initiated primarily in response to locally identified needs and priorities. For example, in Centerville a new superintendent came into the district with a mandate to implement a new educational philosophy which had recently been articulated by the school board. This new philosophy embraced the notions of individualized instruction and respect for the child which characterize the open-education movement. It was generated by both community and faculty concerns that traditional programs were perpetuating what they called the "dismal institutionalism" of their schools. The Title III project represented the superintendent's attempt to meet this need.

In Midville, however, a career education project was initiated not as a change in district practices but as an expansion of an existing program. Midville had expressed interest in career education before federal funding was available explicitly for this purpose. The pleasant suburban community had a record of progressive management and had been operating several exemplary vocational projects. It embraced the idea of career education when it was just being developed at the federal level and began a project under Title I. When funds then became available explicitly for career education, the district used the money to expand its program beyond the Title I schools. Throughout this period, the project remained a high priority for the district.

Unlike Midville and Centerville, Seaside initiated a Title III project in response to pressure for change from the school, rather than the district, level. This Title III open-education project was the result of teacher demands that "something be done" about classroom problems arising from change in the characteristics of entering students.

In all of our cases we found a consistent relationship between the educational importance and priority of the needs which generated the project and the degree of success it eventually achieved. Where federal funds were viewed as a way to support a solution to a specified local educational need, then commitment tended to be high, and the project itself often constituted a significant departure from current district practice. Explicit expression of district interest in a change agent project encouraged project participants to take project objectives seriously and to work hard to achieve them. An innovative project is both a challenge to the status quo and a complex technical undertaking. Thus it often faces many political and administrative roadblocks. In the projects we visited, it was apparent that unless those responsible for project support—usually the district staff—expressed clear interest and commitment to the goals of the project, each obstacle tended to compromise the project's basic concept more and more, and to erode whatever initial staff enthusiasm existed.

We observed another mode of project initiation which could also be characterized as "problem-solving" in some sense—but the important difference was that the "problems" and resulting "solutions" were not identified by local educational personnel. And, as a result, school personnel did not evidence similar commitment and support for these projects. That is, change agent projects were begun in a few instances because people or groups outside of the school district's normal political system felt strongly about a particular project or need, and developed the project on their own with the hope that the district would take it over. But in the projects we

visited, these hopes were not realized; the district merely played indifferent host. For example, in Bikson, a local university developed a model career education project and then "sold" it to the LEA. The faculty even assisted the LEA in writing the proposal—but they played no role in the actual implementation. The LEA never became seriously involved in implementing the project, however, and the project never got off the ground.

A state Title III project experienced even less cooperation from the LEA. In Northwood, a Roman Catholic nun established a private street academy for high school dropouts when she couldn't get the LEA to support the idea. After two years of hand-to-mouth existence based on local business contributions and some state aid, the LEA finally agreed to serve as a conduit for state Title III funds, which the academy had lobbied for successfully; however, the street academy was denied full incorporation into the LEA.

The few projects initiated by the LEA management, for reasons other than concern for a particular educational need, did not fare much better. In two of our career education sites, the projects were initiated because the community demanded them. In both cases, these were Model City areas for which special vocational education funds had been set aside. When the community initiated the projects and demanded the right to run them, both the LEA and USOE gave in to its requests. These projects were used as devices to hire people from the local community and had no clearly defined strategy. Both were marked by internal political strife and dwindling support from students and parents. And, in both cases, the LEA completely ignored the project.

In summary, most change agent projects were initiated either primarily as a response to available money (opportunism) or in response to an educational need identified by individuals in the school community (problem-solving). Other projects represented either an outsider's solution to a need also identified outside the LEA, or a local response to a demand made by a group outside the district bureaucracy. Opportunism occurred most frequently in response to categorical, targeted federal programs, or when funds could be acquired by routine proposal preparation, whereas the competitive "untied" nature of Title III funds (particularly state Title III) sometimes promoted a problem-solving approach to change and permitted district staff to start up projects that responded to local needs and interests. These diverse incentives and motivations for innovation were important because they implied different degrees of commitment and support. Furthermore, in the projects we visited, unless the commitment was there from the start, it never built up once the project began.

PROJECT IDENTIFICATION

The first step in the initiation process, then, is when LEA management recognizes that a project should be considered either to deal with a particular problem area (reading, teacher performance, etc.) or to take advantage of a particular source of funds (Title III, Vocational Education, Part D, etc.). The next step is design and development—the means by which the project's objectives will be carried out. This phase should be of particular interest to federal policymakers because it represents the single most important opportunity for inducing the LEA to try something new.

During this phase, one might expect to find the LEA, particularly the problem-solving one, engaging in some type of systematic review to identify treatment methods or packaged materials which could be used to fulfill the objectives of its project. All of the fields we studied have been analyzed in the educational literature, and many corporations and individuals have developed commercial materials for such projects.

But, surprisingly, this type of search seldom if ever took place—despite the many and varied incentives which may have prompted interest in proposal preparation. Typically, the people who were formulating the project turned to familiar sources or treatments. In Lewison, a nucleus of four staff members wanted to emphasize student involvement, individualized instruction, and building up student self-concept as part of the educational process. One of them, who had raised federal funds before, was encouraged to write a proposal for a Title III project that would work toward these aims. She wrote the proposal along the lines suggested by a program in pre-service teacher education at a local university that she knew about.

In other instances, federal change agent money was used to expand an existing practice. In Sandwood, for example, the Title III multiage childhood education program was initiated in order to apply more widely the approach of a pilot program undertaken in the district the year before. As mentioned previously, the Midville career education program built explicitly on the district's past successful experience with career education.

The ideas for change agent project methods and strategies can come from three principal sources:

- Individuals or groups within the school district (often those specifically established to identify and secure outside funds).
- Local advocates (individuals or groups) who develop change agent projects essentially on their own, without any serious district support.
- People or units outside the district.

In general, opportunistic change agent projects tended to rely more heavily on outside developers and consultants than did problem-solving projects. The source of the idea and subsequent proposal development appeared to have an important impact on implementation and outcomes.

A designated working group was by far the most common means used to identify and develop projects. If the group worked in isolation, it was likely to face greater difficulties in implementation than if it worked closely with a representative sample of district staff, particularly potential implementers. Usually a member of the district staff was assigned to write the proposal, or volunteered if the subject matter was within his area of special interest. The proposal and project plan, then, were developed in isolation, without much participation from the teaching staff or key administrators.

In the projects we visited, we found that no matter how good the quality of the treatment finally proposed, the project plan was likely to underestimate the problem of winning staff acceptance. For example, in Eastplace, the project director spent two years developing career education materials before they were implemented in the classroom. The project involved a complex conceptual framework utilizing sixteen behavioral outcomes, hundreds of content-specific behavioral objectives, and more than forty curriculum modules keyed to the objectives. Although teachers were

utilized in developing the modules and objectives, the overall design was the project leader's own. One year after implementation, the level of classroom utilization appeared to be quite low, and few of the teachers seemed to follow the project design in using the materials.

Similarly, in West Bay, a combination school/community group was formed to help develop the project plan. When this group was unable to agree on a single plan, four alternatives were submitted to USOE for its final choice. When this group continued to act as a steering group during implementation, its inability to reach consensus continued to hamper the project.

In Centerville, however, a committee of teachers was formed to work with the project leader in developing the project plan. Individual teachers accepted responsibility for different elements of the plan. As a result, the project was tailored to each school, and the staff felt a strong sense of participation and commitment to the project.

Implementation seems to be easier if those responsible for developing the project work closely with the staff members who must eventually implement the project. We found that this early involvement led to an important sense of "belonging," to a belief on the part of implementers that project objectives were important to them and to the target group. This also suggests that communication skills are an extremely important qualification for the project leader—much more so than substantive skills.

The second way in which ideas for projects can be generated is by individual advocates. The Adamston reading program, as sponsored by Right-To-Read, was largely designed and operated by the project director in a single school. In Sandwood, a multiage program was begun in a single school, without any outside funds. This pilot project then became the basis for an extensive Title III multischool project. The people who initiated these projects were very committed, which often promoted similar zeal and dedication in the project staff. Staff enthusiasm, in turn, contributed a great deal to helping projects through rough spots and compensated for the extra effort of implementation.

The third way projects were generated was at the initiative of individuals or groups outside of the formal LEA structure. When an LEA adopted projects designed by outsiders, the quality of implementation suffered. District staff tended to distrust "outside experts" and had little patience for complex project rationales. In Coaltown, for example, a professor of occupational education, 150 miles away, was hired to write the career education proposal and to run the project on a part-time basis. His notions of radical change and his lack of administrative experience so alienated the teaching staff with whom he had to deal, that he had to be virtually removed from the project. The first year of the project was a complete waste of time, in the eyes of the district staff. Similarly, in Bikson, a local university group completely designed a model career education project and turned it over to the LEA to run. The district staff then proceeded to eliminate most of the project's key concepts because they were too theoretical.

But an important exception to the disappointment of such "outsiders" projects as Coaltown and Bikson occurred when the outsider's plan was brought into the district with very strong and explicit support and commitment from key district administrators. In Eastown, the idea and design for the Title III open-classroom project were brought to the district's attention by an outsider. She "sold" her idea

to the superintendent and the director of elementary education, who in turn gathered the support of the principals and teachers in two elementary schools. Once the two schools had agreed to participate, the outsider was brought into the district to direct the project. Inevitably, there was great resentment toward her during the course of the project, largely because she was an outsider. But the strong support of the superintendent and director of elementary education was able to elicit the continuing participation of project schools. After three years, the project is adhering quite closely to its initial design and apparently is successfully meeting its stated objectives.

PROPOSAL ACTIVITIES

The next stage in project initiation (often concurrent) is to prepare a proposal for funding. With the exception of the state plan Title III projects we visited, this was usually viewed primarily as an administrative rather than a substantive task. The principal issues generally had to do with budgets, and the people assigned to write proposals typically had previous experience in "grantsmanship."

This attitude reflected the fact that formal proposals were seldom the vehicle for selection decisions. Most of the funding sources required submittal of a brief project abstract or preproposal as the basis for project selection. LEAs that were invited to submit formal proposals knew they were almost sure to receive a grant. In fact, in some Right-To-Read projects, these assurances were given even before the preproposal had been drafted. Not surprisingly, the formal proposal, then, was often more akin to a ratification than to a sales piece, and was an attempt to work out the details—budgets, funding constraints, and some type of evaluation strategy.

Title III proposals (particularly state Title III) were somewhat different. Title III funds are awarded on a competitive basis, without limitation to a particular group. As the program has evolved, a high premium has been placed upon the development of a comprehensive, well-thought-out project proposal. In fact, some districts (even those with extensive prior experience with federal projects) called upon outside consultants and experts at this stage. Some of the Title III projects we observed drew on the experience of nearby PACE (Programs To Advance Creativity in Education) center staff to help with proposal preparation. Or the SEA itself often assisted an LEA in Title III proposal preparation, after the initial screening stage. This extensive planning and detailed project specification may have benefits for project implementation, but a number of school personnel complained that Title III proposal requirements were unrealistic, forcing the staff to specify in advance goals and treatments which might (or should) be modified over time. Nonetheless, some projects saw proposal development as a planning period and used the Title III proposal development process as a way of preparing the school organization for the needs of the project.

The Sandwood Title III project staff attributed a portion of its success to the fact that the Title III proposal reflected the concerns of many people in the school community: district administrators, building principals, parents, and teachers. In fact, the original Title III proposal for this exemplary project was written by a parent, after meetings with teachers and administrators.

PLANNING ACTIVITIES

Most formal project planning activities took place between the time a district knew it would be funded and the time when the project was implemented. In the projects we visited, planning was generally an extension of the idea generation phase and was usually carried out by the same people. In Centerville, a university professor who was to become the project director began working with the staff in March as an unpaid volunteer to plan the summer's training sessions and the fall program. In Eastown, the project director took several of the project teachers and principals on a tour of the British primary schools. The Seaside project director, who was also the building principal, made this tour.

This early planning usually centered on two major issues: definition of treatment and identification of target group and project sites. The former, if not already specified, usually occupied a few staff members for several months. After funds were awarded, the staff sometimes tried to tap all of the literature which might be relevant to implementation. There was belief among teachers who participated in such efforts that the federal government should make more and better packaged materials available. But our experience suggested that even where these materials were available, the staff usually decided to develop its own. (See Sec. III.)

In projects that received awards by April or May, there were several months of planning before the start of the school year. But in projects that were notified of awards in late summer, very little implementation took place the first year, and this first year was essentially a planning effort.

The "problem-solving" projects devoted considerable attention to developing a clear statement of the project's goals, often incorporating the views of the regular teaching staff and providing the basis for selecting treatments. When project staff failed to bring teachers into this development effort, the materials they developed were often not used for the purposes intended.

In most of the change agent projects there was an explicit rationale for selecting project sites or target populations. Selection of Right-To-Read sites, for example, was supposed to reflect the quality of reading instruction and reading achievement in the school. Title VII funds were directed at schools having the highest percentage of non-English-speaking students. Staff development projects by and large attempted to recruit volunteers to participate in project training strategies. Most classroom organization projects were installed only in those schools or classrooms where there was staff interest, and the staff had agreed to attempt to implement project objectives.

Sometimes other considerations intervened in the selection of project sites or participants. In Sandwood, the project director had wanted to ensure that there were at least two project teachers in any one school (for reasons of moral support) and that school principals supported the basic precepts of the project strategy. However, these plans were changed in the early stages when the school board sought to establish at least one project classroom in each of the board members' districts and to include Title I in the project.

In Eastown, project schools were selected on the basis of the characteristics of the principal. One project school was selected because district administrators saw the principal as restless and eager to try something new. The second school was selected because the new principal was seen as weak, needing development and

extra attention. After district administrators made the suggestion, both principals and staffs agreed to participate in the open-classroom project.

But in the absence of compelling reasons to include or exclude a given school or class in the project treatment, these choices were usually made somewhat arbitrarily by the district staff. Teachers or principals were not often consulted.

CONCLUSION

In the projects we visited, there was a clear relationship between the way a project was initiated and its probable implementation and outcome. The more successful projects were typically motivated by educational needs which had been identified by LEA personnel. The resulting commitment and support appeared to be important for a number of reasons.

First, political and moral support from senior management was essential until the project was far enough along to be completely integrated into district operations. Many different forces act to reject innovative efforts. Without management's unequivocal support, this resistance is unlikely to be overcome. For example, if the project was focused on a school, then the principal's support was required. If it was districtwide, then the superintendent had to be clearly behind it.

In more than one instance, local needs dominated federal intent, and the resulting projects had little fidelity to the LEA proposal for federal funds. Middleton, like many other large cities, received a Right-To-Read grant with virtually no stipulations as to project content. The money has been used, in combination with funds from Title I and Title III and assistance from local universities, to provide summer workshops for teachers in three new open-space schools. The focus of the workshops was on open space, not reading. The project did not utilize any specific approach, let alone diagnostic/prescriptive strategy, to improve reading instruction. The project director believed it was her job to improve the teacher's overall functioning in the classroom—not just in reading. Although the project may succeed in improving reading programs, this was not its principal objective. Yet it met a local priority in its contribution to the successful transition from traditional to open-space schools.

Second, where projects were initiated on the basis of some passing fad or funding opportunity rather than because of some long-term need, interest or commitment was usually superficial and transitory. New fads, demands, and funding possibilities arose to distract management's attention, and the project was left to fend for itself. This was largely the fate, for example, of the career education projects which we observed.

The third reason why initiation based on local needs and strong commitment seems to be important is that school districts seem unwilling to reclaim projects which have gone astray. No LEA that we observed ever tried to restructure an unsuccessful project to serve some more useful purpose. This was the case even for LEAs which had clearly demonstrated their competence in running other projects. Our observations suggest that it is extremely unrealistic to expect a school district to do something wise with its federal money if it is not already committed to something wise when the funds are first received.

III. IMPLEMENTATION

In this study we have defined implementation as that part of the innovation process that occurs when plans and proposals confront reality—when participants attempt to carry out the proposed innovative strategy.[1] As project plans and objectives become translated into practice, principal actors change, issues shift and are re-focused, new interests emerge and old ones change, as do their relative importance and their significance for the outcome of the innovative plan. This section addresses the following questions:

- What activities characterized the process of implementation in the projects we visited?
- What attributes of the innovative project and implementation strategy, as well as the institutional setting, influenced the implementation process?

In making judgments about the extent of project implementation, as well as in identifying those factors that influenced the course of implementation in a particular project, we relied on classroom observation and open-ended interviews.

To assess the extent to which a project had implemented its objectives, we looked at the kinds of materials employed in project sites, and how they were used. We observed the staff at work to determine whether they were doing what they said (and often honestly believed) they were doing, and tried to determine how closely these activities conformed to stated project goals. And, whenever possible, we talked to the students, parents, and other members of the school community.

For example, in an open-classroom project: Was the classroom stocked with materials for the student to handle individually, or just with a publisher's basal series? Were the materials easily available for children to use, or did the teacher use them for large-group or whole-group sessions? Did the classroom, bulletin boards, and other displays show a lot of materials made by the children, or did the displays reflect primarily the teacher's (or publisher's) artistic talents and interests?

If the classroom environment was supposed to be noncompetitive and humanistic, was there evidence of competition among the children for grades or status? For example, were only the "best" papers posted on the bulletin board? Were there charts detailing each pupil's progress relative to others? Did teachers tend to speak of "slow" and "fast" groups, or did they talk about their student groups in terms of their interests and particular problems? Did open-classroom teachers talk about "teaching to" their students, or did they see their role in terms of helping them learn and pursue their own interests? How did the students feel about their own experiences in school? Did they have a sense of sharing responsibility for their own learning? Did they feel free to ask questions and explore new areas?

On the basis of such observations, we made judgments about the "success"—the extent—of implementation for each of the projects we visited. In the Eastown project, the physical environment of the classrooms, the materials and the way they were used, the interaction of students and teachers, and the teachers' perceptions

[1] See Vol. I, Sec. III.

of their role in the classroom led us to conclude that the project had been well implemented and that the central ideas of open education had been incorporated by project teachers in their day-to-day classroom behavior.

However, these "indicators" of successful implementation were not present to the same extent in the very similar Seaside open-classroom project. The Seaside project, in our view, had put into use only the trappings of open education, and many of the staff had yet to fully incorporate or understand the principles of open education. For example, even though the project classrooms all had "interest centers" when we observed them in May, the interest centers in some classrooms had not been changed since September. This suggested that although project teachers had acted on the notion that a diversity of "nontraditional" materials should be available in the classrooms, they did not fully understand the purpose of centers or the necessity of changing these materials as they became "old" and student interests changed.

In this same school, we observed very traditional relationships between students and teachers in which the teachers talked and students listened—albeit on rugs, as befits an open classroom. Student teachers in this school told us that a number of teachers organized their classes in the small groups appropriate to this educational model only on visitors' day. Other signs about the school raised questions in our minds about how well open education had been implemented. For example, as we waited in the principal's office, a number of children came in with "citation slips" for talking or running in the halls or playground. This, too, was the only school of the classroom organization projects we visited in which our research team was not allowed free access to the classrooms. We were forced to make an appointment, even if only to observe for a brief period. In sum, in the Seaside project, practice was closer to a traditional approach than to the stated open-classroom goals.

In order to understand why a particular project was implemented the way it was (e.g., What was most helpful? What problems were encountered? How were they solved?), we talked to the major participants at all levels of the school district, and tried to put together a picture or a history of what had happened in the course of project implementation, as well as to identify the attributes of the innovative project and the institutional setting which significantly influenced that history. These experiences have led us to conclude that the process of implementation is basically a process of adaptation between the change agent project and the institutional setting. We can thus begin to identify those attributes of the innovative strategy and the organizational setting that seem to correlate with successful adaptation or implementation.

A PROCESS OF MUTUAL ADAPTATION

Volume I proposed a conceptual model of change based on our analysis of the research reports on organizational change and on educational innovation. Our fieldwork lent empirical support to that model of implementation. We found that regardless of project design or institutional setting, in the projects we observed, implementation was essentially an organizational process characterized to a greater or lesser extent by mutual adaptation. The following subsections illustrate the nature of the process we observed and suggest how different project characteristics and institu-

tional settings affected mutual adaptation, and how the different adaptations that took place during the implementation stage affected the results of change agent projects.

The projects we visited were very different in their objectives, methods, and institutional setting, but the adaptations they made were often strikingly similar. Most projects made many or all of the following changes:

- Reduction or modification of project goals
- Amendment or simplification of project treatment
- Reductions in the amount of behavioral change expected from participants
- Reduction of expectations about the impact of the project
- Changed organizational patterns
- Learning new skills or attitudes

However, the type and extent of mutual adaptation that is *possible* in a project depends on the project design, particularly on how complex and specific the methods and goals are, on how flexibly the project can cope with unanticipated implementation problems, and on the motivations of principal actors.

The most extensive mutual adaptation took place in projects, such as open-classroom projects, that were highly complex, relatively unspecified in terms of treatment, and required a significant amount of change on the part of teachers and administrators.

In the Eastown open-classroom project, there was enormous change in the attitudes and behavior of project teachers. In the course of three years, they completely "changed over" from traditional to open-classroom practices. They were required to redefine their roles with students, create and use new classroom materials, learn new methods for recording and interpreting student progress, learn to coordinate activities with parent aides, and so on.

Project design and strategies also changed over time. The original idealistic and very ambitious goals of the project were revised on the basis of the first year's experience, which indicated that participating teachers were not able to acquire new skills and behavior as fast as expected. As a result, teachers' learning "schedules" were stretched out. Project design was further modified in the third year when one of the two project schools decided not to continue on the path set out by the overall project strategy. While the project design called for both schools moving into integrated-day curriculum strategies in the third year, one school indicated that it preferred not to do this but to use the third project year to "consolidate" the considerable new learning which had already taken place. Consequently, in the third year of the project, two somewhat different models of open education were operating under the same project umbrella.

A staff development project offered an example in which considerable change or adaptation was made in project design, but little change took place on the part of the participants. The Wagonia Title III project began with four objectives: (1) reading improvement, (2) improvement in student school attitudes, (3) improved intercultural relations, and (4) implementation of differentiated staffing strategies. After two years of project operation, the first three goals were essentially dropped by the project. The fourth goal, differentiated staffing, has yet to be met because the strategy for achieving this objective was based on an organizational development

model of change which assumes that open and improved communication between staff is requisite to any change. (This has been characterized as the "truth/trust" model.) In two years, the staff has not yet been able to achieve truth and trust. Thus the project has not yet faced the question of implementing differentiated staffing. In this instance, it can be argued that the considerable modification or reduction in project goals was a direct result of unchanging attitudes on the part of the staff.

In contrast to the adaptive behavior seen in highly complex and unspecified projects, those projects which exhibited the least mutual adaptation usually had simple, narrow goals and well-specified or purely technological treatments. For example, most of the career education projects we visited were implemented essentially as laid out, and relatively little learning or change was expected of teachers. The exceptions occurred where the projects were designed by outside consultants, requiring substantial redesign when they were turned over to the district staff—as in Coaltown or Tip County.

Nevertheless, some of the highly specified projects, such as the Adamston Right-To-Read project, did require considerable change by participants, who were required to learn new ways of teaching reading or to add the teaching of reading to their regular science or social studies course work.

We observed that superficially similar types of mutual adaptation often were the result of very different motivations or events. For example, both the Eastown and the very similar Seaside Title III open-classroom projects made like changes in their goal statements after the first year of project operation.

As discussed previously, the modifications in the Eastown project were a result of a careful reassessment of the project's idealistic and ambitious initial goals, and of a desire to keep in close touch with development of the project. Consequently, the goals were rewritten to describe a pace for implementing change which conformed more closely with the reality of the project schools.

Goal modification in the Seaside project, however, resulted from different factors and did not help with implementation of the project. The first-year evaluation of this Title III project indicated that effects on students fell below the levels specified by the original project proposal. Project participants felt that these disappointing results did not reflect a "failure" of the project treatment but instead were the result of a shift in the characteristics of incoming students,[2] and feared that these evaluation outcomes would jeopardize the funding future of the project. Consequently, the project goals were rewritten in broad and sweeping terms that, in the words of the project coordinator, were "all but unmeasurable."

Unlike the Eastown project, the goal modification was not the result of careful self-assessment and did not lead to more self-conscious or effective implementation strategies. In fact, this revision seemed to remove the issue of goals from the minds of participants; this removal may have been one of the factors contributing to the superficial implementation we observed in this project.

These two cases illustrate the potentially complex and interactive nature of project implementation. That is, in these instances, although both projects modified their goals, the contrasting consequences of the two adaptations resulted from very different and often subtle motivations and concerns. These, and other projects in our

[2] This school is located in a neighborhood that is changing from predominantly white to black. The shift in racial composition, however, has had no effect on the socioeconomic character of the area. It remains middle to upper middle class, mostly professionals.

field studies, suggest that one must know both what happened and why, in order to assess the quality of the implementation or understand variations in project outcomes.

For example, in addition to constraints imposed by project treatment, the nature of adaptation, the extent to which it can occur, and the consequences of implementation also often depend largely on strategies for dealing with both anticipated and unanticipated problems. Though such strategies are usually unstated, they are based upon implicit conceptions about the process of implementation and lead to somewhat different project strategies. There are at least three such views. One standard notion is to think of implementation as a more or less automatic or "self-winding" process in which plans are implemented as they are laid out, and achievement of a desired outcome depends mainly upon adopting an appropriate technology. This essentially technological concept of implementation underlies the "package approach" to change and is implicit in the expectation that better technologies will lead to improvements in educational practices and in student outcomes.

A second and more sophisticated concept of implementing innovation can be described as a rational planning strategy. This notion of implementation recognizes that innovations, particularly complex and ambitious plans for change, are not self-winding, but generate problems that must be overcome. However, the strategy for dealing with these problems assumes that they are more or less predictable, can be anticipated, and thus can be dealt with by careful and comprehensive planning.

A third strategy does indeed view implementation primarily as a process of "mutual adaptation"—an organizational process in which an innovative plan is developed and modified in light of the realities of the institutional setting, and in which the organization changes to meet the requirements of the innovative project. In this view problems and consequences are not always predictable, and the course of implementation cannot be confidently or completely anticipated. Advocates of this perspective argue that there are some important factors—such as individual incentives or crisis situations—which probably cannot be predicted at all.

From the perspective of project design, the innovative strategies we observed reflected all three concepts of the change process. For example, some of the Right-To-Read projects reflected the belief that, once installed, a particular reading strategy (such as High Intensity Learning or DISTAR) would generate its own momentum and lead to the hoped-for student outcomes. Other projects (such as the Eastown open-classroom project) were designed with the expectation that problems would arise during the course of implementation, but also with the assumption that careful planning could prevent such problems from interfering with successful implementation. Still other projects we visited (e.g., Sandwood) were designed in the knowledge that unexpected problems or contingencies would arise. Therefore, organizational devices for maximizing flexibility—such as frequent staff meetings and the availability of "on-the-spot" resource personnel—were built in to deal with issues as they arose and to make whatever changes were required.

In summary, the *extent* of mutual adaptation which might take place during the implementation phase is largely determined by the *substantive* design of an innovation and the motivations of principal actors. But we found that *how* adaptation occurs, *why* it occurs as it does, and the *consequences* of various implementation activities across project types were primarily related to attributes of the innovative strategy and the institutional setting.

ATTRIBUTES OF THE INNOVATIVE STRATEGY[3]

The innovative strategy which characterizes a project results from a number of choices about how to implement a specified set of objectives. What seems to be the most desirable or effective thing to do? What is possible? Not possible? What process fits best with local needs and conditions? What follows is *not* an exhaustive list of those attributes of innovative strategies which we found to be related to successful implementation. Rather it is an attempt to set down those features which affected the evolution and implementation of projects as we observed them.

Training

We found that projects differed greatly, even among similar types (e.g., reading, career education), in the timing, amount, and type of training given the project staff. The projects we visited ranged from those in which training was a principal ingredient to those which offered essentially no training at all; they covered the spectrum of pre-service, in-service, less formal "on-the-job" training, or some combination of these approaches. Training also ranged from strategies utilizing local experts as technical assistants in project workshops to projects that relied extensively on outside consultants. The focus of training sessions ranged from the very general, such as philosophical discussions about the merits of humanistic education, to the very concrete, such as how to set up a learning center or develop skill cards.

As might be expected, training was more important to successful implementation in complex projects and less important in highly specified or primarily technology-based projects. In general, it did not appear to make much long-term difference to project implementation whether pre-service or in-service training was the primary vehicle for introducing staff to the new project strategies. But classroom organization projects constituted an important exception. The absence of concrete pre-service training in those cases appeared to retard project implementation and to create more serious problems in the first few years than were encountered on other similar projects.

Both the Sandwood and the Eastown open-classroom projects offered two weeks of intensive pre-service training, which in Sandwood included observation in a pilot open classroom within the same district. Many of the Eastown staff had seen open classrooms in operation in a trip to England the summer before the project started. The result of this preparation was that while the staff at both sites experienced an exhausting and frustrating first year, they had a notion of what it was they were trying to achieve and most of their efforts were in the right direction.

In contrast, the Seaside open-classroom project began with no formal training for teachers, essentially because of very late funding. Many of the staff knew little more about open-classroom strategies than what they may have read in the popular press, and practically none of the staff had seen open-education strategies in operation. This lack of prior exposure and instruction led, in our view, to the installation

[3] We are distinguishing between the *substance* of an innovative project—i.e., overall goals and treatment content—and the *strategy* for innovation—i.e., the means chosen for implementing the project design. For example, no two of the open-classroom projects and no two of the Right-To-Read projects employed the same process or strategy for achieving their almost identical objectives. It is the impact of these strategic differences that we are discussing here.

of "symbolic" open-education practices which acknowledged the surface trappings of the concept, but showed little understanding of the central precepts.

For example, many of the staff in the project dutifully set up interest centers and removed most of the traditional furniture from their classrooms. But the interest centers did not serve their purpose since they were only rarely changed, and the teacher continued to use traditional "teacher-talk" methods with children seated on the floor at her feet, which nullified the effects of classroom reorganization. Subsequent in-service training and visits to other open-classroom sites did not seem able to rectify the wobbly and somewhat misdirected start-up of this project.

In general, the more training of whatever form (in-service or pre-service) the better. However, we found that the benefits of training were conditioned by the content of the training program and by the characteristics of the training staff. In all of the projects where training was important—especially reading, classroom organization, and staff development—teachers strongly preferred very concrete, "how-to-do-it" workshops (as opposed to a more general lecture format) given by *local* personnel. The most smoothly implemented projects were fortunate to have either in their project director (e.g., Adamston) or in district resource personnel (e.g., Sandwood) people who knew what they were doing, understood what potential problems might arise, and had the experience to make specific suggestions to help teachers improve their performance. Conversely, participants felt that outside consultants performing a similar technical assistance role were almost always ineffective and disappointing. For example, Right-To-Read relied on outside technical assistance more than any other project type in our study—and at only two of the Right-To-Read demonstration sites we visited could project staff name one outside expert they considered helpful.

On the whole, personnel in the projects we visited believed that outside experts could not understand their particular problems and were unable to give practical advice.

Meetings

Some less obvious benefits of extensive training sessions also resulted from frequent staff meetings. Projects which made a point of scheduling frequent and regular meetings of the staff tended to have fewer serious problems in implementing project strategies, and demonstrated higher morale and a greater sense of cohesiveness on the part of project staff. Staff meetings not only provided a forum for working out problems within the project, communicating project information, and deciding on plans for the future, but also provided support and encouragement for participants. This support, in turn, led to a greater sense of group cohesiveness and morale; it also led to the sharing of "good ideas" and broke down the traditional isolation of the classroom teacher.

Finding time for these meetings was a problem which some projects (or districts) were able to solve, while others were not. The Sandwood project, for example, arranged for time off one afternoon a week for project staff meetings. Participants almost universally singled out the meetings as one of the most important factors contributing to project success. Such time to share ideas and problems was, according to respondents, especially valuable in the rough and exhausting first year of the project. If meetings were infrequent or irregular, morale was noticeably lower and reports of friction within the project staff were higher (as in Eastown and Brickton).

Also, the lack of meetings retarded the sharing of good solutions to common problems, as in Seaside.

Meetings were important for yet another reason in the Right-To-Read projects. It was easy in these projects to lose the sense of "project," since the program was typically spread through three or more schools, and the project director became central administrator, while the school principal assumed the role of director. Communication with the central office staff appeared to be especially important in Right-To-Read if the teaching staff was not to feel somewhat adrift and alienated from the project.

In the Brickton Right-To-Read project, teachers were unable even to identify the goals or concepts of the Right-To-Read project. Furthermore, some actions taken by the central staff—a series of conflicting memos, for example—looked to the project staff like a series of mistakes reflecting disorganization in the Right-To-Read administration. These memos, however, were in fact the result of a number of central district administrative decisions that the Right-To-Read staff had to respond to. The resulting disaffection of the Right-To-Read teachers could have been remedied in part if they had been informed of the cause of the problems.

In contrast, the Adamston Right-To-Read project director held a number of monthly luncheon meetings in which he would "listen to the winds" from his staff as well as confront teachers with data concerning their own activities. The director believed the relatively high morale and uniformity of implementation in this Right-To-Read project were in part attributable to these regular meetings.

Frequent and regular meetings, in sum, although often difficult to arrange, appeared to have a high payoff in terms of reducing friction within the staff, raising staff morale, and establishing a sense of project purpose and cohesiveness.

Development of Materials

Local staff helped to develop project materials in many projects we visited; this activity appeared to make an important contribution to the effective implementation of change agent projects. This was particularly evident in the classroom organization projects, which were highly complex, inherently difficult to implement, and based on no prior, well-specified model of project treatment. However, even in less complex projects, the benefit of teacher participation in materials development was apparent. Development activities ranged from a careful assessment of existing products or technologies, which were then repackaged into a form which reflected local interests and needs, to activities which, beginning from scratch, produced a wide range of project materials. The first approach was most common in the more narrowly focused well-specified projects, such as Right-To-Read and career education—although the more effective career education projects tended to develop all their own materials. Extensive materials development was common in the more complex and amorphous projects—classroom organization and staff development—or in the Title VII projects for which no locally relevant materials could be located.

Materials development was often the central focus of first-year activities in classroom organization projects, and consumed an unexpectedly large amount of staff time and energy. In Eastown, all of the major materials used in the project classrooms were developed by the teachers themselves. Even though there are many commercially produced, individualized basic skill materials, they were inadequate,

in the opinion of the project director and her staff. Consequently, with the help of a retired master teacher, the project staff created "task cards" that could be used diagnostically and also permitted richness and diversity in possible student activities. These teacher efforts have led to the creation of two kits: (1) a mathematical concepts and skills kit which is coordinated with the rudiments of a criterion-referenced[4] test, and a math materials resource list that is matched to math concepts; and (2) a language arts kit which includes a plan for developing the mechanics of writing on an individualized basis and a kit to stimulate and motivate creative writing.

Both our observations and teachers' comments indicated that development of these kits was central to the success of this project, not just because it may have resulted in "better" products, but because it provided an opportunity for "learning by doing" and contributed a sense of pride and ownership in project accomplishments. The exercise of working through open-classroom concepts, and discovering their significance in practical terms of the classroom, permitted teachers to understand project precepts from the ground up and to incorporate these principles in practice.

Project officials in the Brickton Right-To-Read project acknowledged the contribution of local materials development. Brickton devoted a disproportionate amount of time, energy, and resources to the development of a Criterion Performance Assessment Test to measure the effects of project activities. Our research team tried to discover why the project staff decided to develop its own test when there are a number of commercially marketed tests that will serve the same function (such as the instrument components of the Wisconsin Design for Reading and the High Intensity System). The general response was that Brickton had had a number of disappointing experiences with commercially produced materials, and needed to sell Right-To-Read as being relevant to district students.

"We know our needs," remarked the project director, "so we thought why shouldn't we try to develop our own?" An elementary school principal said that involvement was the main reason why they decided to develop their own test. "We did it so that everybody would feel a part of the project." Project personnel also stated that local test development allowed them to define a set of reading skills to meet the needs of the district's inner-city students. Project personnel expected that the Right-To-Read program might be more acceptable to the Brickton schools in general if it could be pointed out that the system had been locally developed.

In contrast, the superficially implemented Seaside open-classroom project did no materials development at all. Project staff continued to rely on the basal series and workbooks they had used before, often using these materials in the traditional style that the Title III open-classroom project was designed to replace. Not only did this staff generally fail to display the thorough knowledge and understanding of open-classroom techniques and concepts evident in Eastown and Sandwood, but a spirit of project pride and cohesiveness was absent as well.

The importance of development activities for project implementation was evident even in the Title VII projects. The staff of bilingual education projects almost universally protested the absence of commercial materials suited to the objectives

[4] Criterion-referenced tests measure a student's progress toward specified goals in a particular course of instruction. They are distinguished from conventional achievement tests, which seek to determine students' relative ranking in overall grasp of general subject matter.

of their project. Nonetheless, it seemed to us that the staff learned a great deal about the traditions, customs, and beliefs of their target group in the task of searching for and creating appropriate materials for their bilingual activities.

The creation of materials which were germane to a particular locale also appeared to be important in career education projects. In Midville, films and tapes were produced locally and thus reflected employment conditions; descriptive materials and even sample job applications were collected from local employers. Efforts to produce materials that reflected local job markets and educational conditions generally characterized the relatively successful projects. In the less successful career education projects, there was an effort, often futile, to secure prepackaged materials from other districts, from the SEA, or from publishers. In general, it seemed to us that the significance of producing one's own project materials did not lie principally in the final product, but in the activity of development itself. This observation obviously raises questions about the feasibility of exporting packages and technologies with the hope of replicating another project's accomplishment. These issues will be explored more closely in subsequent research.

Voluntary Choice

The self-selection of project participants and project sites appeared to benefit implementation. This is not entirely surprising, since it is likely that "volunteers" may also be those less in need of change, but it does raise questions concerning expectations for project dissemination within and between districts, as well as questions about the effectiveness of largely "volunteer" projects for "non-volunteers." Most projects we visited were developed and staffed by volunteers, people who were willing to try something new, and who were particularly interested in implementing the proposed innovation. In all the classroom organization sites we visited, for example, the staff of participating schools had the option of reassignment if they did not want to participate. People who disagreed with project aims or methods, or those who rejected the additional workload, were able to leave. They were replaced with teachers who volunteered for the project. Furthermore, in some projects, participating staff not only were volunteers but were hand-picked by project administrators. The teachers charged with implementing the Sandwood project, for example, were, in the words of the project evaluator, "excellent by any light. They would succeed in any classroom."

Thus, voluntarism seemed to our observers to eliminate much of the resistance to change generally expected in innovative efforts, at least among direct participants, and also to produce an exceptionally capable cadre of project participants.

Incentives

Change agent project staffs identified a number of reasons why they worked hard to implement change agent strategies and endured the frustration, uncertainty, and fatigue of the first year or so. Interestingly, although a number of the projects offered tangible rewards for participation or successful implementation of project strategies, the staff most often mentioned more intangible professional incentives: a chance to learn a new skill; an opportunity to put into practice some of their own ideas; a possible solution to perceived student needs. (See, particularly, Eastown, Centerville, Sandwood, Midville, Adamston.) In addition, the increased professional

stature and visibility that often went along with project participation also appeared to bolster implementation efforts in the uncertain beginnings.

In some projects, even those incentives related to professional status did not appear to be very important compared to basic professional interest in the project objectives. One staff development project (Dodson) offered almost any tangible and intangible incentive one could think of to promote implementation. In this elementary school training program, the trainee teachers were overwhelmingly female, place-bound, lower middle class, and secure in their jobs. Among this group, visibility, responsibility, ambition, status, and extra money were not significant incentives for participation or implementation. The only important incentive seemed to be the intrinsic satisfaction derived from doing better teaching. We found that trainees who believed that the project had made a significant difference in their classroom activities all recognized that their previous teaching practices had to be changed, and believed that project activities could improve their skills as teachers.

But the project staffs we observed were mostly made up of competent volunteers, and we might expect them to have higher than average professional motivation. Sometimes, in fact, professional concerns got in the way of change agent project implementation. In the Eastplace career education project, for example, teacher concerns with student reading problems and a district movement toward increased teacher accountability for student progress in reading and math led many teachers to ignore career education when they felt that it conflicted with their basic classroom responsibilities. And, in one Right-To-Read project, the staff of one target school refused to implement the prescribed Right-To-Read strategy because they believed another approach was better suited to their low-income student body.

Our fieldwork also provided some evidence that without professional interest or commitment, more tangible incentives (such as money or credit toward advancement on the district salary scale) did little or nothing to secure good project implementation. Such incentives sometimes served to increase attendance at workshops, for example, but they did not seem to lead to the acquisition of new skills or behavior.

In the Rockton Right-To-Read project, for example, teachers reported that the extra money they were paid to attend Saturday morning workshops was not enough to make them pay attention to or act on what was being presented. The staff did not feel the workshops were important for them because they did not believe the district had much commitment to the project. As one teacher said, "If the district were really serious about improving reading, they would give us released time during the week, not make us come on Saturday morning." Teachers reported that they went to the workshops, "but didn't listen." (Similar comments were expressed by staff in two other Right-To-Read projects.) Or, in the Lewison Title III staff development project, few beyond the initial cadre of recruits could be persuaded to use the project kits, even though teachers were paid $100 for the successful completion of each kit.

Money and other tangible rewards, in sum, appeared to function effectively as a gesture of appreciation (e.g., Centerville); but they were apparently not effective by themselves in stimulating interest in a project where it did not exist otherwise, or in inducing teachers to acquire new skills if their own professional interests or concerns did not lead them to see such new learning as important.

Elementary Grade Level Focus

In the change agent projects we visited, innovative projects that included high schools and junior high schools were harder to implement than those in the elementary schools. The Right-To-Read projects consistently encountered resistance at the high school level as they attempted to persuade science or history teachers to see themselves also as teachers of reading. Career education projects had a similar experience. Wherever project managers confronted secondary school teachers of "solid subjects," who seemed to have large intellectual and emotional investments in academic purity, they withdrew—often before any battle occurred.

For example, the Wagonia Title III staff development which focused on an entire junior high school finally had to drop the 9th grade staff from the project because of its lack of interest and reluctance to cooperate with the project. By the same token, the staff of the elementary level open-classroom projects we visited were concerned about the traditional and somewhat rigid attitudes of high school and junior high school staff. Neither the children graduating from project classrooms nor the proselytizing efforts of project staff appeared to have much impact on the practices of upper level schools. Project experience and alumni did not stimulate junior high faculties to reassess their traditional methods; instead, project children tended to be viewed as "impertinent, noisy, and unable to sit still." (See Eastown.)

In sum, our experience indicated that not only did high school teachers tend to view themselves as subject area specialists, not in need of new skills or attitudes, but the students themselves appeared to be less amenable to change.

Critical Mass

Although project participants did not show much resistance, particularly where there was strong district commitment to the project, nonproject personnel sometimes impeded project implementation. Implementation was a particularly trying and tiring experience for teachers in the staff development and classroom organization projects. In some instances, their nonparticipating colleagues showed little sympathy for project objectives, felt threatened by the changes being made, or displayed antagonism for the disruption which the project invariably caused in the school.

Negative or indifferent attitudes from nonparticipants eroded staff morale and constituted a pressure for the project teacher to "give up" if she felt isolated and unappreciated. However, we observed that a group large enough to be a "critical mass" of project teachers in a given site could provide moral support, sympathy, and new ideas. The existence of such a "critical mass" also appeared (particularly in the staff development projects) to generate a norm for change in a school, a norm which was unlikely to be promoted by an isolated teacher working to implement an innovative practice.

Summary

In summary, we found that projects which were relatively well implemented or had the smoothest implementation were also characterized by the following attributes:

- A strong training component
- Practical "how-to-do-it" workshops
- Local expertise and technical assistance
- Frequent, regular staff meetings
- Local materials development
- Voluntary, highly motivated participants
- An elementary school focus
- A "critical mass" of project participants

Readers who are students of organizational literature and the general literature on planned change will note two obvious omissions from this list of "more effective" innovative strategies—the mode of project decisionmaking and the pace of prescribed project activities. The currently popular ideology of planned change favors a "democratic" style of project management and decisionmaking and also believes that gradual implementation is more effective than a "blitz" style of introducing new practices and attitudes. In principle, this is a persuasive point of view, but empirical evidence to support "democratic" as opposed to "authoritarian" leadership styles, or gradualism versus blitz, is inconsistent and not conclusive.

Our fieldwork also yielded mixed evidence about the relative merits of particular leadership styles and pace of project activities. For example, in the highly "democratic" Sandwood classroom organization project where staff, parents, and administrators jointly and equally participated in formulating project objectives, assessing progress, and proposing project activities, the participatory style was frequently cited as an important factor in the project's success. However, in the Wagonia staff development project, participation and democracy resulted in two years of indecision and foot shuffling without much accomplishment.

Furthermore, there were two projects in our sample (Adamston and Eastown) which self-consciously practiced an extremely authoritarian style of management. However, these projects were also well implemented and highly successful. In the Dodson staff development project, the initial blitz strategy was so successful that these schools could not serve as demonstration sites. (Project personnel viewed them as having achieved too much too quickly and thus as a threat to new recruits who would view their accomplishments as "impossible.")[5]

This is not to suggest that differences in management styles did not make a difference in implementation. They did. Even though the success of project implementation did not appear to vary according to leadership and management styles, the human costs were high in those projects which attempted to install new practices via blitzkrieg. These projects experienced low morale, staff resentment, and even threats of mutiny in the first two years of project operation. (See Eastown.) In both cases, eventual retaliation against the project by defenders of the status quo seemed likely. The human costs of these methods led us to wonder whether such an approach to change was necessary.

We suspect that the relative effectiveness of "democratic" as opposed to "authoritarian" leadership and gradualism as opposed to blitz may well be determined by the situation. The districts in which heavy-handed management led to successful

[5] This dramatic change was apparently brought about by the use of an intensive human relations program, designed for recalcitrants, but applied to receptive volunteers.

project implementation were also districts where there was little active interest in educational change. "Forcing" innovation may well have been the most effective way to bring about significant change in such circumstances.

Parent involvement also played a smaller role in project implementation than we believed it would. Although community attitudes were a force to be reckoned with, the key factor seemed to be how a project was presented to the parents rather than its substance. In most of the cases, school officials were left pretty much on their own to design and run the project. Parental concern remained a watchful but neutral force.

ATTRIBUTES OF THE INSTITUTIONAL SETTING

Structural and demographic characteristics of the institutional setting no doubt influenced the selection and initiation of change agent projects and thereby determined the context in which we observed project implementation. Given the nature of our fieldwork sample and the fact that the research focused on projects, not districts, we were unable to identify direct effects of organizational status or structure that could be clearly related to the implementation process.[6] Instead, the attributes of the institutional setting which influenced the process of implementation related to the *organizational climate* of the change agent projects.

Administrative Support

In the sites we visited, the extent of support for a change agent project at all levels of the district—from the central administration to the school principal—influenced the course of project implementation. Support and commitment to the project at the district level often seemed to be vital in pulling a project through the rough first year.

For example, when the Eastown open-classroom project almost collapsed because teachers threatened mutiny in response to heavy-handed practices of the project director, intervention by the director of elementary education was able to smooth ruffled feathers and retain teacher (and project school) participation in the project. Similarly, in Centerville, resistance to team-teaching/open-classroom concepts or inability to deal with the resulting problems on the part of principals was dealt with first by clear guidance and direction from the superintendent, backing up the project director, and then by changes in personnel.

Likewise, the Brickton Right-To-Read project had strong backing from the superintendent, and the staff said that without this support, "We would never have made it in the beginning." (Although, as we will discuss below, the superintendent's support later became a liability.) In the initial phase of the Brickton project, the project staff ran into some resistance from principals who stopped attending meetings and started spreading rumors about what was and what was not going on in Right-To-Read. The staff brought these problems to the attention of the superintendent, who subsequently called in the principals to remind them of the importance

[6] An exception is the career education projects in which successful implementation was seen (in our small sample) to vary with district wealth. All of the relatively well-implemented projects were located in comfortable suburbs or prosperous smaller cities (e.g., Tip County, Midville). Large cities exhibiting symptoms of "urban crisis" and small towns or rural areas did not do nearly so well (Coaltown, Bikson).

of Right-To-Read in the district and the importance he attached to the project. After these reminders, the staff had a good deal more cooperation, at least overtly, in the impact schools.

Conversely, implementation of the Dodson staff development project was retarded as a change in school board membership led to changes in district staffing, with consequent weakening of central administration support. The new administrators did not support many of the central precepts of the staff development project and made changes in project strategies and status. For example, the project director was "demoted" in the district hierarchy, and an attempt was made to dismantle the school-based precision learning centers, which were a key component of the project. Some of the area superintendents supported the objectives of this Title III project, but most were indifferent or opposed, which hurt the project. When principals looked for signals about the merits of complying with the unfamiliar new procedures, the indifference of their immediate supervisors was a clear signal. Furthermore, a few area superintendents actively opposed the program, going into schools and even classrooms to point out that the noise level associated with individualization was "chaotic" and that the carpet squares installed in the place of traditional furniture "bred vermin."

Similarly, a number of the career education projects (e.g., Bikson) and the bilingual projects (e.g., West Bluff) floundered and failed to achieve much momentum or much staff enthusiasm, largely because the central administration was indifferent to project goals.

School principals' attitudes had even more dramatic and immediate import for project implementation—particularly where participating staff had a dual allegiance to the project and to the school. One of the Sandwood project classrooms was located in a school headed by an ex-military officer who believed that discipline and order in the classroom were essential and did not support the "child-centered" strategies advanced by the project. Consequently, the project teacher's classroom was moved to the room directly across from the principal's office, and the principal's visits and complaints about "noise and chaos" were frequent. And, not coincidentally, as the second year of project operation began, this project teacher found that most of the school's "problem" children had been reassigned to her classroom.

Supportive principals in this project provided quite a different atmosphere, going to great lengths to provide extra services for classroom teachers, to make schedule changes that would accommodate project requirements, and to encourage other teachers in the school to view the project classroom as a "model" for their own practices. The result was increased professional pride and esteem for the project teacher and the slow spread of project practices to nonproject classrooms throughout the school.

The relationship between the principal and reading teachers was equally important in implementing Right-To-Read projects. For example, one project had a troubled first year until frictions were ironed out by reassignments of the Right-To-Read staff. Generally, the attitudes of the principal toward the Right-To-Read project signaled the rest of the staff whether or not to take Right-To-Read seriously.

There was also consensus about the "critical" role of the principal in the career education projects we visited. However, it was difficult to identify just how principals' actions significantly enhanced project success. In most of the career education projects we visited, the main role of the principal was simply to permit the project

to exist in the school. Those few schools in which principals were self-proclaimed and dedicated proponents of career education invariably had the best projects—characterized by interesting approaches, novel departures, and enthusiastic participation (see Eastplace and Midville).

The importance of the principal's support was clearer in the staff development projects. Teachers' ability to carry out the lessons acquired in training depended on the attitude of the principal. In Dodson, for example, where strategies of individualized instruction were sometimes interpreted as "un-American," principals often opposed the changes encouraged by the staff development project. Although trainees were ostensibly volunteers, many teachers were "volunteered" by their principal for participation in the project. The project leadership had wanted to work initially with a group of teachers who would be most receptive to the project's behavioral objectives, yet many principals sent teachers who were their favorite disciplinarians, or their worst teachers. And once "trained," it was extremely difficult for a teacher to sustain new techniques, if the principal did not modify his evaluation standards and did not support the teacher in a distinct departure from school norms.

Other, less subtle, instances of principals' opposition were observed in Dodson: dissenting teachers were swamped with problem children; one group of teachers who expressed an interest in team teaching was exiled to temporary wooden buildings separate from the rest of the school (referred to as "the shacks" by the other teachers); teachers were burdened with new extra duties.

Not surprisingly, administrative support was most important in highly complex projects which attempted to implement substantial change in existing practices. In these projects, explicit support from district administrators often carried them through the uncertain first years and, conversely, few of these projects seemed able to survive administrative indifference or opposition.

Experience with Innovation

Prior experience with innovation appeared to affect the course of change agent projects. For example, projects which were an extension of existing district practices (e.g., Sandwood) or which were built upon the past experience of project personnel (e.g., Dodson, Eastown, Adamston) all had less difficulty in implementation than did similar projects elsewhere, and tended to make greater headway in the first year than did projects that were novelties for most of the participants.

District experience with innovations also had an effect. Districts which we considered to be "innovative" (see Vol. II) generally displayed a greater tolerance for failure and uncertain start-up (see Centerville) and showed greater flexibility in dealing with unanticipated problems or project requirements (e.g., Sandwood). As a result, project staff in these districts did not appear to feel pressure to produce immediate "significant results"; problems were solved before they became crises; and project personnel felt free to propose appropriate solutions or strategies even when they deviated from original proposals (e.g., Centerville, Midville).

However, in some instances, propensity to innovate in a district was also seen to hamper implementation efforts. In some of the districts we visited, several innovations were underway simultaneously. A number of the career education projects experienced teacher attitudes of "not another innovation!" For example, in Eastplace teachers were at first quite opposed to career education because they were

generally fed up with innovations and with all of the associated upset and extra work. One Right-To-Read project was in a district which had already mandated wholesale changes. Right-To-Read objectives added yet another request for change to already overburdened teachers, many of whom consequently elected to slight Right-To-Read directives. Likewise, in one of the open-classroom projects (Eastown) the project director believed that the commitment of one of the project principals to experiment with a reading package in his school conflicted with the project director's own objective of focusing project activities on project-developed materials.

In general, the problems caused by competing innovations were less severe in the more complex projects, many of which encompassed all activities of schools or classrooms. In the ancillary projects, however, new projects starting up simultaneously in the district sometimes led to shifts in the district staff's interest and priorities that eroded the attention given to change agent project implementation.

Unanticipated Events

Practically no change agent project we observed progressed through a course of implementation without having to respond at some point to an unanticipated situation—some relatively trivial and others momentous. The ease with which projects responded to these "shocks" in their plans and objectives was related both to the flexibility of their project design and personnel, and to the innovativeness of the district and its commitment to the particular project.

For example, the Brickton project was disrupted by events in the district. The main activity of Phase I of this project was the administration of a comprehensive, locally developed criterion-referenced test. The Brickton city government, however, had put a freeze on the use of outside contractors, so the project staff members had to find another way to print their tests. They chose to have the tests printed by students in the district's vocational education programs, with disastrous consequences for the project. The student printers printed the wrong version of the tests, with errors, and in insufficient numbers. The project also ran into trouble trying to get the seven million tests properly distributed through the newly reorganized school system.

Just when it appeared that the project's printing and distributional problems with the tests might be over, a citywide teachers' strike brought testing to a halt. After the strike was over, the superintendent ordered all Right-To-Read project activities to cease for the remainder of the year. His feeling was that the teachers were so sensitive that they would not be receptive to trying new things—in particular Right-To-Read, which was identified as the "superintendent's project."

These events would have represented a setback in any project, but they were disastrous in the Brickton instance because of the poor communications between project staff and classroom teachers. For example, the failure to explain to teachers that the problems with the tests were the result of the city government decision gave teachers the impression that Right-To-Read was totally disorganized, badly run, and ineffective. The lack of communication was compounded by the teachers' strike. The teachers' attitude toward the superintendent and their disputes with him over pay created an atmosphere in which Right-To-Read mistakes were misrepresented and blown out of proportion. The project staff is not optimistic that the bad image of Right-To-Read in Brickton can be improved or that initial momentum and enthusiasm can be recaptured.

Events in the district also forced the Dodson Title VII project to modify its activities in midstream. This bilingual education project began as a totally Mexican-American program, operating in three schools. In 1972, two years after the program began, a new district integration policy forced the program to restructure operations. Integration in Dodson was accomplished by grade-level reassignments between black and brown schools (the latter had been officially identified as white schools). With this reorganization, the project target population was spread over six schools, and non-Chicano students appeared in project classrooms. The consequence was dilution of project staff efforts as the same staff tried to cover six schools instead of three, and the effective doubling of classroom efforts as non-Spanish-speaking children were added (i.e., the addition of blacks required that project staff attend to the teaching of Spanish as a second language as well as the teaching of English to Spanish-speaking children). However, with the support of the district and a flexible project staff, this project managed to weather these problems more or less gracefully.

Not all disruptions in project plans are related to "outside" events. For example, in Centerville, an attempt to extend the classroom organization project to the junior high on a pilot basis, during the project's second year, met with complete failure. During the third year, a completely redesigned program was installed in the junior high, consistent in objectives with the elementary project but quite different in technique. This revised program achieved a significant degree of success, even in its first year.

In sum, unanticipated occurrences in the course of project implementation were always disruptive, but projects which had district support, flexible personnel, and good communication with their staff seemed to be able to meet these disruptions without great cost to project effectiveness.

Summary

The following attributes of the institutional setting were observed to influence the implementation of the change agent projects:

- Degree of administrative support and commitment
- Past experience with the particular innovation
- High propensity to innovate
- Administrative flexibility
- Good communications

All of these elements relate to organizational climate—and the extent to which a district supported change efforts generally and a change agent project specifically. However, because of the project focus of our fieldwork, we could not identify other aspects of the institutional setting which were consistently or significantly related to project implementation.

IV. PROJECT OUTCOMES

We have already discussed our concept of project "success." In this section, we will use that framework to describe the types of project outcomes we observed, and to describe those elements of the change agent project or institutional setting that appeared to contribute to differences in project outcomes in the sites we visited. Specifically, the following subsections will be concerned with the impact of the project on the district (i.e., classrooms, teachers, and students), and the impact of the federal seed money on educational activities both inside and outside the LEA (i.e., project continuation and dissemination).

IMPACTS ON PARTICIPANTS

Impact on Classrooms

The change agent projects we observed generally did make a difference to life in the classroom—in the atmosphere of the rooms, the curriculum content, and the teaching techniques and resources.

Classroom changes were the most pronounced in the classroom organization and staff development projects. They usually involved more openness and informality; more flexible and varied use of physical space; more evidence of self-expression and student-initiated work; more individualized programs. Classroom changes were most apparent where the projects provided teachers with some form of classroom support, in the way of technical or administrative assistance, which complemented the training and/or materials development phases of the project (see Appendix A for details).

In the projects we visited, classroom effects were greater in the lower grade levels. Classrooms with young children often showed dramatic project effects. Changes in the higher elementary grades were much less dramatic, while those in high schools were almost negligible. In a number of sites, high school classrooms were officially dropped from projects after experiencing severe initial problems in implementing project treatments.

It seemed to us that a number of causes acting together may have increased the obstacles to short-run change in upper grade classrooms. First, younger children are thought to be easier to teach, and more open and responsive to changes in learning style. Older children have already been conditioned by their previous school experience to expect a certain environment. For instance, staff of the elementary school open-classroom projects believed that students who have been long exposed to more traditional teaching styles are less able to respond, at least initially, to opportunities for greater openness, expression, or responsibility than their younger schoolmates who have not yet been so conditioned.

Also, as mentioned in Sec. III, upper grade teachers often tend to consider themselves subject matter specialists, and to resist attempts to insert nontraditional subject matter (like reading, career education, or bilingual culture) within their specialty. Our fieldwork suggests that appeals to consider the whole child are appar-

ently less effective with a teacher who is already worrying about only one small part (language arts, science, math, etc.) than with a teacher who must work with the child on a variety of subjects.

Furthermore, changes in one part of the curriculum seldom affected other parts, even when subjects were taught by the same teacher. This characteristic of narrowly based curriculum change projects was especially evident in the reading projects we studied. But we also observed it in math (math labs) and career education. Change agent projects which focused on only one part of the curriculum seemed often to be captured by the very specialists who most needed to adopt the changes they resisted.

Impact on Teachers

An innovative project might affect participating teachers in a number of ways. At the simplest level, it might change the technique or materials used by the teacher in accomplishing given learning objectives. It might change the techniques or policy used by the teacher to run her classroom or the relationship she establishes with her students. At a more complex level it might change the teacher's priorities or values as to what is important for her to cover or for her students to accomplish.

Finally, her experience in an innovative project might change a teacher's attitude toward her job and profession. It might change her impressions of her own teaching effectiveness and her interest in improvement.

Some bilingual projects we observed resulted in little change in teachers, since they relied primarily on replacements or supplements for the existing staff. Incumbent teachers were not required to make substantial changes. However, in other instances, more far-reaching organizational changes such as team teaching or open classrooms were made as part of the bilingual project.

Although in theory the reading and career education projects sought considerably more, the projects we visited resulted in changes of only the simplest type—in materials and curriculum content. Many of the projects were said to use new materials in the same old way. Rarely did the projects challenge the teachers' relative values about different subjects or their views about their own roles in teaching and learning.

We found that the classroom organization and staff development projects produced much more pervasive results among the teachers. In many cases, the project experience changed them profoundly. These effects were somewhat surprising, considering that many of the sessions were brief, and that project efforts generally did not rub off on the untrained colleagues of project teachers. In many cases, the change agent programs were an unexpected but essential catalyst of behavioral change in teachers.

This impact may have been due partly to the higher status, greater financial rewards, or greater contact with colleagues that change agent projects often produce. In many of the projects involving substantial change in teachers, there was an obvious increase in colleagues' support and solidarity resulting from their common trials. Success in effecting change in teacher behavior was considerably higher in classroom organization projects than in projects which relied on staff development alone.

Impact on Students

Project impact on students has traditionally been the focus of most evaluations of educational innovations. However, as we have discussed, the focus of this study was not "evaluative" in this sense but instead attempted to understand the process of change. Consequently, our research was not designed to measure the impact of change agent projects on student achievement or attitudes. Thus, the discussion that follows relies on evaluation data made available to us by the projects we visited, as well as evidence we gathered in interviews with school staff, parents, and other members of the community.

The classroom organization and staff development projects we studied did not take higher achievement scores as their primary objective. In fact for some projects, the districts expected achievement scores to drop off a little in the first year or so because of the confusion and turmoil of implementation. On the whole, these projects reported no significant changes in student achievement; one or two showed some slight gain, and an equal number, a slight decline. The most striking changes attributed to these change agent projects were in student behavior and attitudes.

In the classroom organization projects, the schools reported declines in absenteeism, behavior problems, and referrals to programs for the mentally retarded. A number of parents claimed that their children showed more interest in school and more self-control, confidence, and direction as a result of project participation.

Staff development projects had similar kinds of outcomes, although far smaller in degree. Staff development projects were usually less intensive than classroom organization projects, and their effects on students were more diffuse, since training activities were not tied to project-sponsored classroom changes.

We were able to gather little evidence on the impact of the reading projects on students. Only one of the reading projects we observed had a completed evaluation that could be used to determine achievement gains. The evaluation of this highly structured diagnostic/prescriptive Title III project showed that while decoding skills were improved, reading comprehension was not. Methodologically, most of the Right-To-Read evaluations were exceedingly weak, compared to those for the Title III reading projects. The data contained in these evaluations seem to indicate only slight marginal effects.

It was even more difficult to assess the effects on students of the bilingual and career education projects. There were no good baseline data to use as a basis for measuring changes in the performance of children in these projects. The best that could be done was to indicate how much time students were exposed to the project's teaching material. This exposure was much greater for bilingual projects than career education. Bilingual project students did receive a substantial exposure to the particular language and culture which was the focus of the project. In career education projects, young students regularly received increased exposure to career awareness material. In higher grades, those few students who were sufficiently motivated to seek them out obtained increased counseling services or access to work experience projects.

CONTINUATION

Continuation of federally sponsored projects is usually thought about in indivis-

ible and institutional terms.[1] That is, a project is considered to be "continued" after the withdrawal of federal funds if the original "package" or "program" of goals and treatments is carried on at some level by the local school district. But our fieldwork suggested that continuation is not such a straightforward question, nor is it always the result of formal district decisions. We observed that continuation could be defined to include persistence of the project at different levels of effort; it could also mean continuation or incorporation of elements of the project that were adapted to suit local conditions.

In addition, although it is usually assumed that decisions about continuing or terminating projects are made at the district level, we found that this was not always the case. While decisions to provide more funds for the project were normally made "downtown," incorporation of many innovative strategies did not always require formal institutional adoption. For example, some innovative technologies or classroom practices were expected to be continued by individual classroom teachers without any formal project affiliation or district sanction. Our fieldwork suggests that research that has queried only superintendents or project directors about project continuation may have underestimated the effects of federal seed money. It is difficult for a district administrator to know about incorporation at the classroom level; indeed, in larger districts, a superintendent may not even be aware that a federally sponsored project has been continued under a different funding umbrella, with a different name.

In our experience, teachers often continued to carry out project strategies, at least in part, after federal funding ceased—particularly in the classroom organization and staff development projects. These individual decisions are the most difficult to identify and track down when "decisions to continue" are tallied. These small changes resulting from change agent projects do represent a positive return on the federal investment in educational change.

Many of the projects we visited were still receiving federal funds, and had not yet seriously confronted the question of continuation. Therefore, some of the suggestions generated by our fieldwork are based in part on *expected* continuation activities —what, in the opinion of major participants, is expected to happen after federal funds are withdrawn. But the gap between expectations and future reality may be large. Subsequent research of the Rand change agent study, which will focus specifically on issues of continuation, should provide data which can support or amend implications we have drawn in the first year of the study.

Continuation of Program Goals and Practices

Continuation or incorporation had a somewhat different meaning for each type of project we examined. For the Title III projects that attempted to promote change in classroom organization practices, continuation meant maintenance of child-centered, individualized, and nontraditional instructional methods. Teachers continuing project activities would be expected to go on with group or individual instruction to support increased student responsibility and decisionmaking, and to organize their classroom activities in a way that acknowledges individual student differences.

[1] See Norman Hearn, "The Adoption Rate of Title III Innovations after the End of Federal Funding," *Educational Technology*, Vol. 10, November 1970; Anthony N. Polemeni, "A Study of Title III Projects After Approved Funding Ends," Ph.D. diss., School of Education, St. Johns University, 1969.

Continuation or incorporation of staff development projects took two forms: persistence of the staff training activities sponsored by the Title III project; or continuation of the changes in staff behavior that were promoted by the training projects.

The reading projects would be judged as "continued" if the district supported the special reading services (labs or special staff) started with federal funds, or if the general approach to teaching reading advanced by the project became part of the district's (or teachers') standard practices.

Because of their nature, continuation of bilingual education and career education projects has to be viewed primarily in institutional terms; that is, these projects would be "continued" if, after the withdrawal of federal funds, identifiable bilingual or career education activities persisted in the district.

Patterns of Continuation

Despite the different objectives of these change agent projects, and despite the somewhat different meaning "continuation" has in each instance, clear and consistent patterns of continuation appeared to exist across the projects we visited.

Replacement vs Add-On (or Training vs. Technology). We found that, on the whole, projects which attempted to *replace* current practices were more likely to be continued or incorporated than were those projects which represented *add-ons* to existing strategies. For the sample of projects we visited, almost all of the activities which replaced current activities included training activities; almost all of the add-ons were technologies or products. Thus it may be that the nature of the project focus (i.e., training vs. technology) contributed significantly to its incorporation. At this juncture we do not have enough data to be sure.

For example, to the degree that the project treatment "took" effectively, innovations that included teacher training or staff development activities have been incorporated or continued almost without exception. All of the classroom organization projects (which attempted to change teacher attitudes and behavior from the traditional to the informal or open approach to learning) have been continued, or are expected to be incorporated to some extent. Participating teachers reported that they "could never go back" to traditional classroom roles and behavior.

Similarly, successfully implemented staff development projects seemed to expect little backsliding in teacher behavior. Thus, although almost all of the staff development projects will formally end with the withdrawal of federal funds, there is evidence that these projects will be "continued" in the sense that the changes they hoped to promote will be incorporated into the behavior of many participating teachers.

But it is worth noting that classroom organization projects produced more extensive and consistent changes in staff behavior and attitudes than staff development projects did. A likely explanation is that the training component of classroom organization projects was intimately tied to meeting project objectives. Participants needed this training in order to meet their day-to-day assignments and the expectations of the project director, principal, and others. The staff development activities, on the other hand, were often not focused on a particular short-run objective or tied to some current school activity. They were more of a "general enrichment" for classroom teachers who were eager to change their teaching methods. This sug-

gested to us that the staff development projects might be more effective if they could be tied to more explicit requirements or program objectives.

One staff development project in the fieldwork sample contrived such inducements in two ways. First, the project staff won district acceptance of their training program as a qualification for a higher step on the district's pay scale. Second, when the SEA required all districts to come up with a new set of performance standards for recertification of their faculties, the project staff successfully inserted their project's own list of desired teacher outcomes. Consequently, all the teachers now have an incentive to pay careful attention to those standards, and the project does not have to rely heavily on teachers' intrinsic motivation to change.

Experience in the reading projects we visited provided further support for the suggestion that staff training tends to "stick" when tied to classroom practices, while most of those activities that were undertaken *in addition to the teachers' usual classroom practices* have been, or are likely to be, dropped when special funding ends. For example, training in the diagnostic and prescriptive approach to reading has taught many teachers that different students learn to read in different ways, and that teachers can teach to these differences. As a result of the reading projects, some teachers have moved away from broadly classifying students as "slow" or "fast" readers and have begun to diagnose specific deficiencies in such areas as word attack or decoding skills. These behavioral changes, which comprise an approach to the teaching of reading (as opposed to a specific strategy or technology), are expected to continue.

Those bilingual and career education projects which simply added new activities and materials to a district's repertoire, but provided little (if any) developmental training for staff,[2] seemed unlikely to be continued or incorporated unless states mandate some type of program, as they now often do for bilingual education. The state sometimes continues to pick up the tab for add-on projects, particularly for career education. The use of add-on materials appeared to wither away in the absence of active encouragement of a project staff and explicit participation in a project. It seems likely that when special project status and staff go away with the last federal check, these additional materials will be put back on the shelf.

Initial Commitment and Priority. A second pattern or generalization that emerged from our field experience concerned the relationship between eventual continuation or incorporation and initial support. That is, decisions about project continuation appeared to closely parallel (or could be predicted from) the decisions or motivations to initiate the project. Projects which were initiated with strong district support and which were also seen as a solution to a particular problem were incorporated almost without exception, albeit at varying levels. And without exception, those projects which represented an opportunistic response to available dollars and received little or no support from district administrators withered away, *even where project objectives were met.*

Also, it was generally true that where projects did receive district support and were seen as solutions to recognized problems, the district probably would have (or already had) undertaken the project activities anyway. In our sample of projects, federal dollars were *not* used to test a new idea, or experiment with an innovation

[2] For Title VII projects, a special continuation problem is contained in the need to train monolingual teachers in a second language, or to add additional bilingual staff to the regular program.

strategy. Instead, these funds served to speed up or expand the implementation of innovative practices to which the district was already committed.[3]

To this point, the experiences of a number of the career education and Right-To-Read programs we visited illustrated the slippage that often occurs when a problem is identified at the federal level (i.e., reading, career education) and the resulting "solution" is "imposed" on local districts. For example, because Right-To-Read demonstration projects were funded even before project proposals were submitted, some districts saw Right-To-Read money simply as a grant-in-aid. These LEAs used the federal dollars to fund their own priorities, even when they conflicted with the Right-To-Read program guidelines. And in the absence of effective federal monitoring or because of oversight, there was little that federal officials could do to remedy the situation.

An almost axiomatic lesson that emerged from our field experience was that people change more easily when the change helps them solve problems that are real to them. Projects that were expected to be incorporated into district practice were usually based on the staff's overriding sense of educational necessity and the significance of the program and the proposed remedy. Our field experience implied that although categorical, targeted programs may be intrinsically more satisfying to the federal policymaker concerned about the national dimensions of a problem, it is unlikely that these programs will lead to much change unless the programs' aims fit local interests and priorities.

Our experience suggested that where local and national priorities are not congruent (as in some of the career education and Right-To-Read programs), federal intent is likely to be subverted to local interests, local administrators will simply take advantage of available opportunities, and the project will probably have little or no long-term impact. In our fieldwork sample of change agent projects, federal dollars were used most effectively when they were used to support locally developed solutions to locally identified needs.

Project staff also offered other explanations for expected continuation or lack of continuation, which can be partially understood in terms of initial district commitment to the project goals and activities. For example, many districts cited "cost" as a reason for not continuing federal change agent projects. However, we saw examples of projects which surmounted cost constraints because districts thought the project was important. In two of the classroom organization projects, extra costs were met by reallocating district resources. In the remaining classroom organization projects, individual teachers elected to "cope" without aides in the classroom because they were convinced that open-classroom practices helped their students. In one Right-To-Read site, where the superintendent had identified reading as a district problem, the extra costs were absorbed by juggling the district budget level.

This is not to argue that cost is no obstacle for districts wishing to continue particular project activities. Rather, our case studies suggest that "cost" constraints may sometimes be a red herring, drawing attention away from the fact that a particular project—despite its relative merits or successes—was not continued or incorporated *simply because it did not represent a high priority for the district.*[4]

[3] If pushed to its logical conclusion, this observation can lead to a (somewhat extreme) recommendation that the federal government not fund districts for special purposes, because local districts tend to do what they want to in any event.

[4] Cost probably is not a red herring but a genuine constraint in career education projects. Rather than relying on teacher-produced material, most projects utilized some form of outside enrichment like field

Similarly, we also observed that those innovations designed or staffed by "outsiders" (such as consultants or special teachers) were usually not well implemented and were usually not expected to be continued or incorporated. In the projects we visited, local involvement and sense of ownership in the change agent project appeared to be important to both implementation and continuation efforts.

We have not discussed student outcomes as a factor affecting continuation. In the projects we visited, project evaluation evidence did not seem to play an important role in decisions to continue or incorporate project strategies. Where project outcome data were used to support such decisions, they were apparently applied to justify a decision that essentially had been made on other grounds. For example, one Right-To-Read project will be continued because the superintendent is highly committed to the project focus and treatment—even though there is now no objective evidence that participation in the project does anything for students' reading scores. Another Right-To-Read project (Adamston) is unlikely to be continued even though it has shown dramatic gains in reading readiness skills and reading decoding skills. District administrators cited lack of effect on comprehension scores as a reason for probably not continuing the project.

In sum, we were struck by the absence of reference to evaluation outcomes in the project sites we visited. On the whole, district and project staff appeared to view evaluation as a necessary ritual, which was tied to the continuation of federal funds but was not important for their own continuation decisions.

Summary of Factors Affecting Incorporation

We observed a number of factors which appeared to be related to the incorporation or continuation of federal change agent practices after the withdrawal of federal funds.

FACTORS PROMOTING INCORPORATION

Characteristics of the Innovation

- Congruence with formal and informal district goals and priorities
- A dominant staff training component
- A focus on project activities that were intended to replace (rather than add to) current practice
- Locally initiated project design and material development

Characteristics of the Institutional Setting

- A high level of commitment and support on the part of district administrators
- Active consumer demand (n.b. Title VII)

External Factors

- SEA or federal priorities consistent with project goals and treatment

trips, counselors, or media centers. These are very expensive to maintain and their continuation is virtually dependent on continued outside support.

FACTORS INHIBITING INCORPORATION

Characteristics of the Innovation

- Cost
- Targeted or categorical program goals or treatments
- Add-ons to current district practices
- Externally developed materials; heavy reliance on outsiders for technical assistance in program design or implementation
- Lack of congruence of project objectives with local needs, priorities, or values
- Special staffing requirements (e.g., bilingual teachers)

Characteristics of the Institutional Setting

- Low level of district administrative commitment to the project
- High level of staff or administrative turnover
- Absence of consumer demand

DISSEMINATION

From the perspective of federal policymakers, one of the most important functions that change agent projects can play in the reform of educational practice is to disseminate successful ideas and activities both inside and outside of the district. Subsequent research of the change agent study will focus more explicitly on questions of dissemination. Only a small number of the projects included in this year's work were actively engaged in dissemination activities. Consequently, the suggestions and interpretations offered below should be viewed as tentative. We expect that they will form the basis for developing working hypotheses to guide further analysis.

Intra-District Dissemination

What is notable about intra-district diffusion of change agent project strategies and materials is how little of it there was. This is most understandable for career education projects, which required special materials and curricula and were therefore unlikely to be picked up by nonproject classrooms in the districts. Most disappointing, perhaps, from the perspective of federal planners, was the absence of diffusion of Right-To-Read strategies in the demonstration sites.

Federal expectations for intra-district dissemination were most explicit in the instance of the Right-To-Read demonstration projects. Part of the Right-To-Read model included designating a project school as an "impact site." Impact sites were to be schools that already had effective reading programs and could therefore help other schools improve their reading programs. We were unable to locate a single instance among the sites we visited when an impact site provided any substantial assistance to the other project schools; we saw only one school that picked up an idea from an impact school. (That idea was to establish a reading resource center.)

Title VII bilingual projects were the most widely disseminated within districts. In the three big city project sites, Title VII projects have had a major influence on

the development of other (non-Title VII) bilingual projects within the district. Title VII projects in these districts shared the benefits of staff training programs, management experience, locally developed materials, and different instructional approaches (such as variations in staffing patterns and pupil scheduling).

With the exception of Wagonia, the Title III staff development projects demonstrated no intra-district dissemination. The Title III classroom organization projects contained several somewhat different instances of intra-district diffusion.

In Centerville, the project tried to implement a new approach to education within the district. Almost every new administrative post in the district was filled by staff members with project experience. Parents were openly enthusiastic about the quality of the program. The only reasons that the project hadn't spread to all classrooms were the limits placed on the use of funds by the grant (50 percent of the elementary student body) and the belief of the superintendent that the district should offer several alternative programs. It was not surprising, therefore, to find many project teachers adopting the classroom techniques espoused by the project.

In Eastown, open-classroom practices were clearly making their way into nonproject schools. This intra-district diffusion had two sources. The project ran a training program for student teachers at a nearby university, and teachers who would subsequently be employed by the district implemented open-education strategies in their classrooms. The district administration supported this project and probably tried to recruit project-trained teachers when it was hiring.

Second, the project operated a training program for teachers and one for principals interested in the concepts and strategies of open education. Although most of the participants in this program came from outside the district, it also affected Eastown staff. For example, one Eastown elementary school principal who was part of this group was in the process of changing his school over from traditional to open classrooms. The effect on participating teachers was less dramatic—particularly if they worked in a school in which the principal did not support open education. Nonetheless, participating teachers reported that their practices were changed by the training program.

In Sandwood, project staff of the multiage grouping project pointed to schools in the district which were moving toward open education and suggested that their project played a part in this change. But this connection was not clear to us. Other schools in the district didn't pay much attention to the project, and we suspect that any move they made toward open education resulted more from the national promotion of the open-school approach than from the presence of the project in the district. However, within project schools, project strategies were adopted by nonproject classrooms. In most of the 19 project schools (each of which contained one project classroom), teachers could point to colleagues who began to implement multiage grouping and open-education concepts.

The principals' attitudes played a significant part in the extent of this diffusion in Sandwood. In those schools where principals did not support open education, there was little diffusion, despite expressed staff interest. But wherever principals endorsed the project, nonproject classrooms were more likely to adopt project practices. A number of principals even supported project diffusion to nonproject classrooms with the aid of the school's discretionary fund, or applied for district funds to move walls or buy special project materials for interested teachers.

But these were the exceptions. By and large, nonproject personnel in the district

paid little attention to the change agent projects. This apparent indifference seemed to stem from an unwillingness to acknowledge the accomplishments of their neighbors or to admit that someone else in the district with roughly the same problems and resources was doing a more effective job. Project staff also reported that other teachers and principals in the district saw the project as a threat.

Doing "something different" requires extra work and time, particularly at the outset. In the view of our respondents, their colleagues feared that they, too, would be expected to work harder and thus ignored exemplary or innovative programs operating in their district, alleging that the project had special resources or that it dealt with a different student population and so would not "work" in their own setting.[5] The bilingual projects cited above were not really an exception. The bilingual projects were not threatening as "innovative" or "exemplary" projects. Instead they offered technical assistance to educators who had to implement similar projects.

Inter-District Dissemination

Our sample provided few instances upon which to base conclusions about the relative effectiveness of efforts to disseminate project strategies outside the district, or about how the effect of dissemination efforts could be evaluated. Only four of our projects (two classroom organization projects and two career education projects) were actively and explicitly engaged in dissemination outside of their own districts. Consequently, the following suggestions must be seen as tentative and speculative.

Until quite recently, the low diffusion rates of educational innovations were usually explained primarily in terms of inadequate information. This explanation generated what has been called a "Rational Man" research and development strategy, which assumed that if educators only had information about more effective educational strategies or technologies, they would adopt them. Another common explanation is that the new educational technologies aren't good enough. In response to these beliefs, federal agencies and private firms have developed packages and technologies which could be applied wholesale to school district operations. For example, these packages are often designed to be as "teacherproof" as possible, so that innovation won't have to depend on teachers' attitudes or behavior.

Our fieldwork experience called into question some of the assumptions of this theoretical approach, and the resulting emphasis on more information and packages. First, we saw no real evidence that lack of information or the perceived absence of well-developed technology were important barriers to innovation at the local level. We found that the dominant reason was lack of interest in change, and a consequent lack of demand for innovative practices. Wherever there was demand, people sought out information, found it, and used it. Where there was no demand, it did not seem to make any difference whether information was present or absent.

Second, our observations suggested that the packaged approach to promoting change at the local level underestimated the importance of prior local interest in change, and also failed to acknowledge the importance of local involvement in project development, as described in Sec. III of this volume. For example, locally

[5] This finding of very low intra-district diffusion is consistent with the conclusion of evaluators assessing the impact of the Ford Foundation Lighthouse projects. Lighthouse projects, it was discovered, gave little guidance to the practices in the home district. Like the projects in our field sample, the Ford-sponsored demonstration projects were almost totally ignored by educators in their districts.

developed materials appeared to be much more effectively utilized and to contribute more to the success of a project than packaged approaches such as Individually Programmed Instruction and Southwest Regional Laboratory materials. In the projects we visited, local involvement promoted a sense of "ownership" and pride, and also gave participants an opportunity to think through project philosophies and strategies in concrete terms.

Also, materials or plans developed outside of the district tended to be viewed by local personnel as "foreign imports." Similarly, districts often rejected advice from outside consultants because they failed to consider the special problems of local schools and students. The Right-To-Read experience suggested that even those "packages" which were essentially management or planning strategies did not seem to be as effective as planners hoped, because they too had an alien flavor and because they often were not flexible enough to accommodate local contingencies or crises.

The reportedly successful dissemination strategies we encountered were structured so as to reduce the perceived threat and the perceived irrelevance of "exemplary" projects. These projects sent traveling teams (which in the classroom organization projects included parents as well as teachers and administrators) to districts that had expressed interest. These traveling teams tried to help local districts design and implement their own projects and did not tell them what to do in detail. In other words, they tried to help districts build their own innovative capacities, and did not try to install a replica of their own model.

Change agent project staff felt that this "traveling circus" approach worked much better than visits to the innovative project from the staff of other districts. Visitors to a demonstration site seemed to feel threatened. They often saw the accomplishments of the project as "overwhelming." For example, visitors remarked that they couldn't imagine how the project could be carried out in their own district.

One project director pointed to another problem with reliance on visits to an exemplary site. He found that teachers who had spent time interning in his program were unable to implement project strategies upon return to their home district because of lack of support from their principals. He believes that a traveling show, which reaches principals (and often parents) as well as teachers, is able to generate the necessary support for an innovative practice.

Our fieldwork suggested that site visits to an exemplary project could be helpful, but usually *after* the change agent staff had first visited the adopting district. The dissemination staff seemed to be most effective when they described particular problems and framed their advice not just in terms of "how they did it in Ourtown," but also discussed how it might be done in light of the problems that the adopter faced.[6]

It is important to note that these dissemination activities did not take place in a vacuum but in response to an explicit demand, stimulated by SEA or USOE priorities. In one state, new early childhood education legislation awarded money to districts developing a plan for multiage, "humanistic" primary education, thereby leading to a great deal of interest in the Title III classroom organization project we visited. In another state, the SEA announced that individualized instruction should

[6] Glaser's work on the diffusion of innovations in the area of mental health supports the suggestion that diffusion is more effective when disseminators go to the adopter rather than vice versa. (Edward M. Glaser, "Knowledge Transfer and Institutional Change," Human Interaction Research Institute, Los Angeles, 1972.)

be stressed, which prompted other districts to ask for help from the Title III classroom organization project. The availability of funds for career education projects led to a receptive audience for dissemination teams from two career education projects. This kind of interest, stimulated by the availability of targeted funds or new state guidelines, doesn't offer much guidance about how best to promote local interest and demand for new practices in the absence of such external incentives.

V. IMPLEMENTATION OF CHANGE AGENT PROGRAMS BY STATE AND FEDERAL AGENCIES

In the preceding sections we have examined the factors which seemed to influence the development and outcome of change agent projects. In that analysis we concentrated on those factors inherent in the nature of the innovation itself, the implementation strategy, or the characteristics of the institutional setting in which it was being implemented. In addition, we were also interested in determining the extent to which the characteristics of the federal change agent programs also have an effect on the nature and the quality of local projects. The four programs we studied have different management strategies and substantive concerns. Nonetheless, these federal programs have a common purpose—the stimulation of innovation—and a common policy instrument—the provision of temporary seed money. Thus they present an opportunity to examine the differential effects of different federal program strategies.

Any change agent program can be described in large part by six factors, each reflecting the basic theory of change on which the program has been designed. The first is the scope or goal of the program. Is it supposed to bring about general improvement in the quality of education (Title III), or only to improve instruction in particular areas (reading, career education), or only for a particular target group (bilingual)?

The second element is the locus of authority to conduct the program. Will it be directed by a federal authority or will it be run by the states? These two factors affect the general pattern of the program. The next four elements are obviously determined by the operating authority.

What criteria will be used to select projects or project sites? Will selection be based on need or quality of the proposed projects? Or will some geographic distribution formula be used?

Next, what type of management process will be required by the program? Some programs, such as Title VII, do not require a standard management approach. Within the Right-To-Read demonstration project, and to a lesser extent Title III, the districts that are funded are expected to follow a specified management approach. Next, how intensively will the funding authority monitor project results, and what power will that agency have to affect the project once it has been implemented?

Finally, what type of support will the program provide to the adopting districts, especially in the way of technical assistance or dissemination of project results?

This section gives a summary of the evidence we collected on how these federal programs were actually carried out, and describes the effects of differences in program approaches in the award, design, or success of the projects they supported. The material in this section is based on several sources:

1. We collected information on the design or management of the four federal programs by examining files and documents from each federal program office and by interviewing the staff who planned and managed the programs.

2. We collected data on SEA roles in these programs by two methods: first, telephone interviews with SEA program managers for each federal program in the 18 states that we selected for our national change agent sample; second, personal interviews were conducted in 9 of those states that were chosen for differences in their management styles so that we could further explore similarities and differences in SEA approaches.
3. During the course of Rand work at the LEA level, both in our survey of 293 change agent projects and our intensive fieldwork at 29 project sites, we collected information about the role of federal or state program officials at the project level.

In discussing these issues, we will focus primarily on the operation of the state Title III program, both because it represents the most actively managed program and because it constitutes the largest portion of our sample. The other programs will be referred to as they differ from our findings about Title III. For those readers who are interested in a more detailed examination of any one particular program, Appendixes A through D to this volume contain documentation on federal and state implementation of each of the four programs of concern to this study.

LOCUS OF POWER

Eighty-five percent of the funds available through Title III are distributed to the states on a proportionate basis. The state education agencies, in turn, exercise complete control over the use and direction of these funds under federal guidelines. In Vocational Education, Part D, funds are provided to the states in a similar manner; half of the funds go to the state while half are administered directly by the Office of Education. For the remaining 15 percent of Title III, for half of Vocational Education, Part D, for all of the bilingual funds under Title VII, and for all of the Right-To-Read demonstration site funds, administration and control are vested within the program offices of the Office of Education in Washington, D.C.[1]

These latter programs are sometimes described as if the states could play an active advisory role, but our interviews showed little evidence of this.[2] SEA officials claimed that federal program offices seldom take the advice of those state personnel who take the trouble to give it. In fact, the state personnel who have attempted to exert some influence over federal programs have generally been frustrated. By and large, we found that the state education agencies tended to ignore the operations of the federally run programs; often they ignored even projects carried out within their own states.

PROGRAM GOALS

Title III has the broadest of all the program goals: to allow local schools to try out new ideas that normally could not be put into operation because of financial or

[1] Right-To-Read also grants funds to SEAs to conduct training programs for school districts, in improvement of reading programs.

[2] In career education, federal officials seem to have invested considerable effort in courting the SEAs with no visible effect on the local districts.

other constraints. Most states followed the same criterion, although a few placed special constraints on the use of the funds, such as requirements that they be used only in programs focused on basic skills. Other states occasionally designated special priorities in an attempt to focus proposals on particular problems, but these priorities were usually not mandatory conditions of awards.

Vocational Education, Part D, funds are to be used exclusively for the support of career education projects that can help create a bridge between school and the earning of a living. Title VII focuses exclusively on providing compensatory support in both languages to bilingual students, and also provides some services to students who come from an English-speaking background. Finally, the Right-To-Read demonstration sites focus exclusively on projects designed to enhance reading achievement in large city schools.

PROJECT GENERATION AND SELECTION

State Title III programs followed more comprehensive project generation and selection procedures than did the other change agent programs. The basic procedure for selecting projects was essentially the same across the states. The sequence usually began when the SEA notified its LEAs of the availability of Title III funds. During the fall a program announcement was sent out by the Chief State School Officer to each of the local districts. This announcement solicited proposals and explained the basic ground rules for funding projects. It also announced any special priorities which the state may have chosen to follow. This announcement sometimes was followed up by talks around the state given by Title III personnel, or by workshops designed to encourage submission of proposals by those districts that had not yet done so.

Interested LEAs responded with a letter of interest or a preliminary proposal, normally running two to five pages, which described the proposed Title III project. These preliminary proposals were then screened by a review panel, which usually consisted of both SEA personnel and an outside citizen advisory panel. The proposals were then graded, based on both the quality of the proposed project and any priorities that the state had elected to follow. Some of the LEAs were then requested to submit formal proposals. These were sometimes restricted to those who scored highest in the proposal ranking, or the "finalists" sometimes also reflected political or geographic distribution considerations. No state appeared to allow all of its projects to cluster in a few continuously successful districts. But neither did most states neglect to fund some projects in their large metropolitan districts, regardless of the quality of their proposals.

Preparation of the full-blown proposal normally involved some negotiation between the LEA and the state. Special workshops were often held to assist in this proposal preparation. In most cases the LEAs preparing proposals were assured that the grant would eventually be received. These final proposals were then submitted again to the state's review panel for administrative approval. The grants were then awarded with the Chief State School Officer's final consent.

Some states made special efforts to encourage proposals from districts that were reluctant to innovate. These efforts included such devices as provision of a simplified standard format for proposal preparation, or completely packaged project models

which a district could simply adopt off the shelf. States that did this tended to see their primary role in the program as getting all of the LEAs to participate, regardless of the changes eventually accomplished.

The allocation of state funds for Vocational Education, Part D, worked essentially the same way. However, since the basic need for the funds was assumed, less effort had to be devoted to justifying the project than under Title III. Also, many of the SEAs devoted more attention to providing technical assistance for career education proposals, in the form of checklists or packaged approaches, than they did in Title III.

In all of the federally administered programs, projects reflected the recommendations of the SEA to some degree. The Right-To-Read project selection was the major exception to this general rule. The large city projects in our study were nominated for inclusion in the program by the district superintendent or an SEA official, and were not based on proposals. Schools were selected from the list without any initial commitment to the objectives of Right-To-Read or any specific project approach.

The result of these somewhat different project selection processes was that state projects, which were more competitively awarded, tended to be more consistently devoted to the expressed objectives of the program. Federally selected projects, on the other hand, tended to be characterized by "financial opportunism," in that the LEA seldom had to expend any great effort to be awarded the grant.

PROJECT MONITORING

Some SEAs monitored Title III projects carefully, and all projects were required to have an evaluation component. It could consist of evaluation by some member of the local staff, by an outside consultant, or by somebody selected by the state. The state project officer usually visited the project once or twice a year, in addition to reviewing all the project documents. Sometimes the state differentiated between project consultants, who provided technical assistance to the local districts, and program evaluators, who played a more independent evaluative role.

The impact of any state project monitor was largely determined by his own skills and personality. Those who wanted to take the time could force an LEA to consider any of their reasonable objections simply by delaying approval on the many program documents that were required. None of the states we visited had any formal system for relating the program evaluations to subsequent funding decisions. In fact, the project funds were seldom terminated for misuse of program funds or obviously ineffective project activities or management strategies.

SEA career education program managers also tended to visit their projects. They were much more likely to have a substantive viewpoint about how the project should be run than their Title III counterparts, because they usually had a background in that field and because they usually participated in developing some of the state's packaged materials.

Monitoring of projects in federally managed programs was much more passive. The federally run Part D program decided that the only role of the project monitor should be to ensure that the project followed its plan. The monitor was not to get involved in discussing potential changes in the operating plan.

In Title VII the program staff was so small in comparison to the project workload that site visits could only be done in crisis situations. Title VII had no formal strategy for providing regular or systematic technical assistance, and the only efforts in that direction were a few sporadic conferences which some of the project staff attended. The Title VII staff's role was to assist the local project people in interpreting and working within the legal and budgetary requirements of their program.

Right-To-Read had a small staff, and program officials were only able to monitor their demonstration site projects during their first year. To provide some technical assistance, the program established four university-based consulting groups which were available to visit sites and answer specific technical questions.

In a few states where there was particular concern with a given problem, the SEA took up some of the slack left by the absence of federal project management. In a few states with large bilingual populations, for example, the SEA developed its own bilingual staff, which was available to provide program guidance and curriculum materials for federally funded programs. In most states the SEA had its own reading initiative in addition to the Right-To-Read demonstration sites. The Right-To-Read funds which were directly available to the SEA were used to support these programs. On the other hand, the SEAs did not make much use of the federally funded Right-To-Read demonstration sites as models for new practices.

EVALUATION AND DISSEMINATION OF PROJECT RESULTS

Only in the state Title III programs were annual evaluations used to make any modifications in project design.[3] Although the quality of evaluation varied considerably from project to project, a number of sound project evaluations were observed. These usually involved complete descriptions of the implementation process, as well as of the project results. In a few cases projects were primarily aimed at dissemination of activities to other districts.[4] However, we found few cases where the SEA directly disseminated local projects to other districts in the state. Almost all the dissemination that did take place was done at the LEA's initiative, or, in the case of nationally validated Title III projects, with Title III funds specifically allocated for that purpose.

SUMMARY

After observing these programs in practice, it appears to us that the federally run programs were generally less effective than those operated by the states. First, those federal projects which were selected by nomination, rather than by competitive proposals, suffered consistently from the lack of commitment by the local district administration. These projects were less likely to have successful outcomes, even though they were likely to be less ambitious from the start.

[3] Under the federal Vocational Education program, which required third-party evaluations for all projects, the only response these evaluations received was pressure to rewrite them when they were strongly negative.

[4] Our fieldwork at individual sites indicated that this statewide effort at dissemination did occur in some instances, although it was loosely structured.

Second, federal program management lacked significant monitoring, which led many recipient LEAs not to take federal objectives seriously. Projects which were closely monitored by the funding authorities usually achieved more attention from local participants.

Third, methodologically sound or comprehensive project evaluations were only obtained in those cases where the evaluation plan was based on detailed negotiation with the monitoring officials. This occurred only in state-run programs. Evaluations which were performed in response to written program guidelines generally were almost useless and lacked scientific rigor.

Fourth, the federally sponsored projects we observed never achieved anywhere near the exemplary status they were designed to, and were typically ignored by the SEAs. The states seemed to take absolutely no interest in the outcomes of these projects or in their ability to serve as "model" programs.

VI. SUMMARY OF FINDINGS

The preceding sections described the central elements of the process of change that characterized the projects we visited, and our assessment of the major differences in the four change agent program management strategies. This section presents a summary of the major findings reported in each section.

INITIATION

A broad hypothesis generated by the conceptual framework described in Vol. I is that district-level support and commitment underlying project initiation affect project implementation and outcomes. Our fieldwork provided strong support for that hypothesis.

Our most general finding was that the initiation process was characterized to a greater or lesser extent by two "models" of adoption: opportunism and problem-solving. That is, most districts initiated federal change agent projects primarily either because the money was available, or as a solution to a specified local need. In only a few instances were projects suggested by new information or outside change agents (n.b. "social interaction" and "linkage" models of change). None of the projects we observed evidenced an R&D, experimental, or even quasi-experimental approach to change.

The projects that were characterized by simple opportunity-based behavior also generally lacked the commitment and support of local district administrators. In the projects we observed, this support was not subsequently generated during project implementation—despite project accomplishments. The frequent result of this lack of district-level support and commitment was that the project staff failed to take the project goals and objectives seriously, morale suffered, implementation floundered, and significant change seldom occurred.

Projects that were initiated primarily as a response to a local need, on the other hand, were usually characterized by a high level of district support and interest. This commitment gave the project status in the eyes of participants and helped staff weather the rough first year or so of implementing significant change in traditional practices.

Other specific findings concerning the initiation process were related to this general finding and its importance for district commitment:

- Projects that were initiated because of a specified local educational need were the most successfully implemented and led to the most change in district practices.
- Projects that addressed goals that the LEA perceived as central were more likely to result in significant change than projects undertaken to satisfy some less central local or federal concern.
- Change agent projects were usually designed utilizing information or treatments that were already known locally, rather than employing information gathered in a search for alternative practices.

- Projects that involved staff responsible for project implementation in project development usually had less trouble with implementation.
- Projects designed by "outside experts" generally failed to gather the support of LEA participants or achieve their objectives.

IMPLEMENTATION

The two general hypotheses suggested by our conceptual framework—that innovation is essentially a process of mutual adaptation, and that implementation strategies will significantly affect project outcomes—were supported by our field observations. We found that where significant change occurred in district practices, project implementation was characterized by adaptation in the initial project design over time and by modification or change in the institutional setting and its members.

Similarly, the characteristics of the innovative project that we found to be most consistently and significantly related to successful implementation and change were those implementation strategies that fostered mutual adaptation and permitted it to take place. Specifically:

- Successful project implementation was found to be related to the *type*, not to the amount of project planning. "On-line" project planning that was an ongoing process permitting frequent reassessment of project methods and goals was found to be the most effective.
- The more training given project staff, the better. Pre-service training, combined with in-service training, was found to be particularly important to projects expecting staff to implement the far-reaching changes embodied in projects such as the classroom organization projects.
- The most effective training took the form of very concrete "how-to-do-it" workshops given by local personnel. Outside technical assistants were generally not effective in the training role.
- Frequent, regular meetings of project personnel facilitated project implementation. They provided a forum for discussing project problems, sharing ideas, and promoting staff morale.
- The local development of project materials, as opposed to the utilization of commercially prepared systems, appeared to contribute to project implementation and the amount of change achieved. Local development provided an opportunity for "learning by doing" as well as a sense of identification with project goals and more thorough understanding of precepts.
- Intangible professional or psychological incentives were more effective in soliciting teacher cooperation and involvement than were more tangible incentives such as extra pay, credit on the district salary scale, and the like. Similarly, projects staffed by volunteers were more likely to be successfully implemented.
- Elementary school projects were typically more successful than high school or junior high school projects.
- Project success was more likely where participants formed a sufficiently large group (a "critical mass") to provide mutual support and share ideas.
- District and project personnel experience with innovation generally and/

o with the specific new practice to be implemented facilitated project implementation.

The existence of other innovative projects in the district sometimes detracted from the attention paid a given project and thus its chances of success.

- Strong administrative support from all levels of the system appeared to be essential to successful project implementation.
- A flexible administrative approach and open communication channels were typical of projects that were able to deal effectively with the unanticipated events that occurred in the course of an innovation.
- Significant classroom changes were more likely to occur when staff were provided with ongoing administrative or technical help from local resource people that complemented the training or materials development phases of the project.

PROJECT OUTCOMES

The following project effects on classrooms, teachers, and students were noted:

- Staff development and classroom organization projects had a greater impact on the atmosphere and activities of the classroom than did the more narrowly focused change agent projects.
- Classroom effects were greater in the lower grades.
- Change in one part of the curriculum—such as reading or career education—seldom affected other parts, even when subjects were taught by the same teacher.
- Classroom organization and staff development projects resulted in the most significant and pervasive changes in teacher behavior and attitudes.

We found that among those projects for which evaluation reports were available the results seldom showed significant gains in student achievement scores. Some projects, particularly the classroom organization projects, did report improvements in student attendance, school-related attitudes, self-control, and confidence.

Continuation

One hypothesis suggested by the theoretical framework is that continuation decisions will not be made on the basis of project merit alone, but will include considerations related to the political economy of the institutional setting as well. Our fieldwork provided some evidence to support this hypothesis. We found that project evaluations did not generally play an important role in local decisions to continue or terminate change agent practices. In fact, we observed that some purportedly "successful" projects were to be discontinued by the district, while projects that had demonstrated no clear relative advantage were expected to be continued after the withdrawal of federal funds. These decisions were primarily a reflection of district-level interest in pursuing the project per se, or more tangential political concerns.

In addition, we found:

- Projects that attempted to *replace* existing practices were more likely to be continued than those which merely *supplemented* the existing curriculum.
- Projects that emphasized staff training (as opposed to the introduction of new technologies) appeared to have the most lasting and continuing effect on teacher practices.
- Training tied to ongoing classroom practice tended to have a more pervasive effect than training not explicitly related to a teacher's day-to-day responsibilities.
- Decisions about project continuation appeared to parallel closely the motivations to initiate the project. Projects that were initiated with strong district support and that were seen as a solution to a particular problem were expected to be continued without exception. Conversely, those projects that represented an opportunistic response and received little or no support from district administrators typically were expected to wither away, even when project objectives were met.
- Projects that were primarily designed or staffed by outsiders (such as consultants or special teachers) were usually not expected to be continued or incorporated.

Dissemination

Only a few of the change agent projects we visited were actively or explicitly engaged in project dissemination activities. The following tentative and preliminary findings concerning intra- and inter-district dissemination emerged from our fieldwork:

- Lack of "demand" rather than inadequate or unavailable information seemed to account for the low level of interest in change agent project practices and materials.
- There was little "lighthouse" effect of change agent projects within the host district; project impact was rarely seen beyond participating schools.
- Dissemination efforts appeared to be more productive where they helped other districts build their own innovative capacities rather than attempting to replicate a specific model.

IMPLEMENTATION OF CHANGE AGENT PROGRAMS BY STATE AND FEDERAL AGENCIES

- State-administered change agent programs were generally better implemented and conformed more closely to proposed project objectives.
- Federally run demonstration projects were frequently ignored by SEA officials.
- Competitively awarded projects appeared more likely to be successful than those funded by nomination.
- Evaluations performed in response to change agent program guidelines were rarely used to modify project design or operation.

- Monitoring of federally administered projects was much more passive and infrequent than monitoring of state-run programs.

In conclusion, we would like to remind the reader of the limitations outlined in the introduction to this volume. These findings are interim and must be viewed as preliminary. They will serve to generate hypotheses that will be explored in the second phase of this study. We expect that the findings presented here will be subsequently refined and integrated with our quantitative work as our research proceeds.

Annex A

RESEARCH GUIDE FOR FIELD DATA COLLECTION AND REPORTING

The following guide is intended to assist the researcher in collecting and reporting field data. It expands on the conceptual summary of the change agent study and indicates what topics, components, and indicators to consider for each of the major concepts: initiation, current operations, original implementation, adaptation, near-term behavioral change, continuation, and dissemination/diffusion.

The guide is not intended to be used as an interview schedule, although the user may choose to follow its sequence. Interviewing styles and circumstances should dictate how data are gathered. Used as a checklist of topics or items, the guide can remind the user of information to be obtained.

The guide should be used as an outline for all project-site field reports. Generally, there are two forms of field data: (1) a raw file of narrative or discussion material, often organized by daily field experiences; and (2) a field report that organizes these data according to the following outline.

INITIATION[1]

Reason for initiation of project

Source of idea
- Author of idea (by position)
- Proponent of idea (by position)

Extension of a practice already in place in this site

Alternatives
- Were they considered? What were they?

Proposal activities
- What people (by position) wrote it?
- What people were involved?
- Whose ideas were considered in writing it?
- Where did it go? (Trace offices)

Funding and grant negotiations

Planning
- What was the process of planning?
- What people were involved?
- What were the major issues?

[1] These are *project/site* phenomena. If any component does not fit the particular circumstance you are describing, omit that component. For example, where the central office unilaterally imposed a project on a school, several of these initiation components will not apply.

Selection of participating grades and/or teachers

- Who did it?
- On what basis?
- Which of the following activities actually involved people from this project site?
  - — Alternatives
  - — Proposal activities
  - — Planning
  - — Selection

Support/Opposition

- Identify by position the proponents and opponents of initiating this project in this school.

Characterization of the initiation process

- Which, if any, of the following models could fairly be said to describe the initiation process for this innovation?
  - — Model A: "Problem-solving/R&D process"
    - Rational sequence of needs assessment, goal setting, alternatives, planning, etc. This includes responses to community, teacher, or economic pressures. Identify source of felt need.
  - — Model B: "Linkage"
    - Model A assistance from SEA, universities, or other external resources.
  - — Model C: "Opportunistic response to available money"
    - Goals and treatments adjusted to means; some of local needs selected to qualify for available support.

Brief description of what happened in the initiation process

Baseline characteristics of the organization prior to implementation

- Size
- Age and condition of facilities
- Per pupil expenditure
- Racial and socioeconomic composition
- Chief use of extra funds (additional personnel, activities, extra equipment, facilities?)
- Pupil/teacher ratio
- Staff turnover (percent of total staff turnover for most recent year)
- Staff age patterns
- Dropout/push-out rate
- Number entering college
- Number of other "special" or discretionary programs and their funds and/or staff size

CURRENT OPERATIONS

Part A: Characteristics of the Project

Goals and objectives
- Clarity, comprehensiveness, origin, etc.

Goal centrality
- How important are the project's goals compared to the school's most important pre-existing goals?

Goal consonance
- Are the project's goals new to the school or something always thought important?

Treatment or means
- Is the project strategy appropriate?
- Which of the following four major types of treatment received more emphasis?
- What was their comparative utility?
  - — Materials
    - Curriculum materials; from inside or outside school, etc.
    - Testing procedures, placement procedures, etc.
    - "Packaged" pedagogical techniques, e.g., teaching guides with lots of supporting materials
  - — Classroom organization
  - — Staff development
    - Target group, frequency, duration, kind, etc.
  - — Additional personnel

Management
- Administrative organization in school
- Administrative relations beyond school
- Resource allocation decisions (who, on what grounds, etc.)
- Planning (how extensive, who participates, etc.)
- Involvement of target groups in management decisions
- Involvement of administration in project activities
- Evaluation (formative and summative). Who does it? How?

Complexity of project
- Number and frequency of contingent events
- Length of necessary sequences
- Extent of cooperation required from different units

Amount of special training required

Amount of change required
- To be successful, how radically does the school have to depart from past practices? Or is change only incremental, or is no change required?

Extent of change required

- As a percent of the school's total staff, how many people have to change in order to make the project successful?

Place where change is to be manifest

- On site of project or away?

Part B: Organizational and Personal Characteristics of the School Site

Organizational components

- Amount of bureaucratization
  - — Hierarchies and chains of command enforced?
  - — Emphasis on position more than performance?
  - — Standard operating procedures (much or little flexibility?)
- Informal versus formal communications
  - — Amount and way in which interpersonal communications bypass and/or supplement formal organizational structure
- Participation in decisions about project
  - — Amount of participation (by positions)
  - — Amount of participation (by process stage of the decision, e.g., planning, allocating resources, evaluating, etc.)
- Organizational capacity to innovate
  - — Amount and extent of prior innovations
  - — Pressure of people interested in or specializing in innovation
  - — Would they feel free to take on a project that might have a big payoff but a low probability of succeeding?

Personal components

- Ancillary effects on project participants
  - — Direct incentives during project (salary, released time, status, etc.)
  - — Credential, certificate, license
  - — Promotion
  - — More desirable assignment
  - — Greater mobility or visibility
  - — Increased responsibility
  - — Satisfactions intrinsic to role performance
- Role correlates of chief participants[2]
  - — Administrators
    - Education (level, place, and type)
    - Age (estimate)
    - Tenure
    - Previous position
    - Amount of experience with previous innovative projects
    - Ambition (what kind of job do you see yourself having in 5 years?)

[2] An adequate characterization of the school as a site for innovation must record some behavioral correlates. These should, wherever possible, be documented. Only one page would be used as a guide for any given respondent.

- How selected for project
- Awareness of "policy" issues around this project
- Career-bound/place-bound (would you accept a promotion to a better job in another part of the country?)
- Amount of salary received from project funds (soft money)
- Number of promotions associated with project experience
- Amount and type of project specific training received
- Percent of time devoted to project

— Project director on site (leader, chief teachers, etc.)
- Education (level, place, and type)
- Age (estimate)
- Tenure
- Previous position
- Amount of experience with previous innovative projects
- Ambition (what kind of job do you see yourself having in 5 years?)
- How selected for project
- Awareness of "policy" issues around this project
- Career-bound/place-bound (would you accept a promotion to a better job in another part of the country?)
- Amount of salary received from project funds (soft money)
- Number of promotions associated with project experience
- Amount and type of project specific training received
- Percent of time devoted to project

— Teachers
- Age (estimate)
- Previous experience (general; specifically with innovative practices)
- Training
- Tenured/not; length of time in this school
- Career-bound/place-bound (would you accept a promotion to a better job in another part of the country?)
- Amount of salary received from project funds (soft money)
- Number of promotions associated with project experience
- How selected for project
- Amount and type of project-related training
- Percent of time devoted to project

— Paraprofessionals
- Amount of salary from this project (soft money)
- Background (socioeconomic status)
- Previous association with the school
- How selected
- Amount and type of project-related training

— Volunteers
- How selected
- Background (socioeconomic status)
- Amount and type of project-related training

ORIGINAL IMPLEMENTATION

The purpose of this section is to record the features of the project as they were initially put in place. The time period for original implementation may be considered as being within the first 90 days or the first one-quarter of the project's life. These original features of the project may be recorded by referring to the major headings from the "Current Operations" section.

Part A: Characteristics of the Project (as it was originally implemented)

Goals and objectives
- Centrality
- Consonance

Treatment or means
- Materials
- Classroom organization
- Staff development
- Additional personnel

Emphasis among types of treatment

Comparative utility of types of treatment

Management characteristics

Complexity of project

Amount and extent of change required

Place where change was to occur

Part B: Organizational and Personal Characteristics of the School Site

Organizational components
- Amount of bureaucratization
- Informal versus formal communications
- Participation in decisions about project
- Organizational capacity to innovate

Personal components
- Ancillary effects on the following project participants (incentives, etc.):
  - — Administrators
  - — Project directors
  - — Teachers
  - — Paraprofessionals
  - — Volunteers
- For any of the major groups of participants, what was the original situation with respect to the important role correlates which could be expected to change as a function of the project?
  - — Career-bound/place-bound
  - — Promotions
  - — Amount of training

ADAPTATIONS

This section repeats the format of the previous two sections and asks you to record any changes between the project as it was originally implemented and as it is now. Briefly record what changes were made and the reasons for those changes.

Part A: Characteristics of the Project

Goals and objectives

Treatment or means[3]

Emphasis among types of treatment

Comparative utility of types of treatment

Management characteristics

Complexity of project

Amount and extent of change required

Place where change was to occur

Modifications Made	Reason(s) for Change

Part B: Organizational and Personal Characteristics

Organizational components

- Amount of bureaucratization
- Informal versus formal communications
- Participation in decisions about project
- Organizational capacity to integrate

Personal components

- Ancillary effects on the following project participants:
  - — Administrators
  - — Project directors
  - — Teachers
  - — Others

[3] Please give particular attention to adaptations in this category.

- Role correlates of chief participants
  - — Career-bound/place-bound
  - — Promotions
  - — Amount of training

Modifications Made	Reason(s) for Change

NEAR-TERM BEHAVIORAL CHANGE[4]

Organizational changes[5]

- Support for school or unit
- Morale
- Other

Behavioral changes in school personnel

- Areas of change affected
- Teacher/learning changes unaccompanied by education achievement changes
- Centrality of area of change affected for school (changes affecting high priority activities)
- Centrality of area of change affected for the person
- Distribution of that change (proportion of people so affected)
- Acquisition of new teaching skills

Changes in students

- Increased educational achievement
  - — By grade (proportion of target group affected; document where possible)
  - — By learning-related characteristics (proportion; document)
- Other education-related changes in students
  - — Sense of fate control (proportion; document)
  - — Amount of participation (proportion; document)
  - — Attitude to school as institution (proportion; document)
  - — Attitude to school personnel (proportion; document)
  - — Attendance

[4] Outcomes of project treatment which occurred *during the life* of projects.

[5] Although the focus is on behavioral change, those organizational changes which have led to behavioral changes should also be recorded.

Value of project to administrators

- Area of change affected
- Would they do it again?
- Current priority ranking
- Recommend for others?

Unanticipated consequences

Negative consequences

CONTINUATION

These components indicate the changes that survive the end of the innovation attempt. They are longer term than the changes discussed earlier. For projects which are still in progress, this will be an estimate.

Refer to "Current Operations, Part A: Characteristics of the Project." Record any features that have persisted or that you expect to persist. This judgment should be made with respect to the specific features of the project which you are describing.

Project techniques and strategy

- Goals
- Treatment (expand to fit your project)

Probable Duration of Continuation (in years)	Extent of Continuation (Express as percent of total site which could be expected to continue with project treatment)

DISSEMINATION/DIFFUSION

This section concerns the exporting of behavioral, structural, material, or technological change from the original place of the change to other places. Refer again to "Current Operations, Part A: Characteristics of the Project." Record any of those characteristics that you have reason to believe have been disseminated to another school or LEA from this project.

Goals

Treatment

Spinoff projects

To How Many Places?	How Will It Be Implemented? (Estimate amount of funding, kind of structure, process, etc.)

CONCEPTUAL SUMMARY
(For Reference)

Why and how did the school initiate the project?
INITIATION
What are the current characteristics of the project?
CURRENT OPERATIONS
What were the original characteristics of the project?
ORIGINAL IMPLEMENTATION
How did the school affect the project?
ADAPTATION
How did the project affect the school?
NEAR-TERM BEHAVIORAL CHANGE
What characteristics of the project are likely to be continued in the school after the money stops?
CONTINUATION
Was the project disseminated to other schools or LEAs?
DISSEMINATION

Annex B

REPRESENTATIVE BACKGROUND MATERIAL FOR A CLASSROOM ORGANIZATION PROJECT

PROJECT EVALUATION, BUDGET, AND PLANNING DOCUMENTS

- Validation report 1973
- Superintendent's end-of-year report 1972-73
- 1973-74 evaluation report
- 1972-73 evaluation report
- 1971-72 evaluation report
- Proposed budget for "An Introduction to Individualized Instruction in the Elementary School"
- Dissemination plan
- Report on project visitations and reactions of visitors
- Final project report, 1st draft 1974
- First-year evaluation—evaluating the open classroom (journal article by first-year project evaluator)
- Final application FY 1971-72, 1972-73
- Notice of allocation
- Application for continuation grant 1973
- Expenditure reports

PROJECT-DEVELOPED MATERIALS

- Project abstracts
- Project reading checklist
- "Values of Learning Centers"
- "About Criterion-Referenced Testing"
- "Family or Vertical Grouping"
- "Vertical Grouping Questions"
- Resource materials distributed by project (3 kits)
- "Children's Play Is the Way Children Learn"
- Flyer describing project-produced materials
- Primary math checklist 6, 7, 8
- "An Introduction to Individualized Instruction"
- Supervision and curriculum development activities description
- "Prescription for Learning"
- Alternative program (secondary education)
- "Educational Programs That Work—A Technical Brief"
- Activity dictionary
- "Individual Structured Learning"
- "Product Development Activities"

GENERAL DESCRIPTIVE MATERIAL

- Project overview
- The project director's subjective view on evaluating open classroom
- Floorplans of participating school
- Principal's seminar—schedule and format
- Report to parents
- Newsletters
- Educational services for school-age parents
- Maps of community
- Projected new activities: 4-5, K-3, K-5
- August workshop 1972
- Miscellaneous correspondence